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(FILE 'HOME' ENTERED AT 11:47:18 ON 14 JUL 2003)

FILE 'USPATFULL' ENTERED AT 11:47:38 ON 14 JUL 2003
L1 8140 S NICOTINIC ACID

L2 432 S L1 AND ADHESIVE
L3 4 S L2 AND MYRRH

FILE 'USPATFULL' ENTERED AT 11:59:53 ON 14 JUL 2003

=> s l2 and gum
81045 GUM
L4 134 L2 AND GUM

=> s l4 and mucosal
11409 MUCOSAL
L5 22 L4 AND MUCOSAL

=> s l5 and pd<1999
2435544 PD<1999
(PD<19990000)
L6 9 L5 AND PD<1999

=> d l6 1-9

L6 ANSWER 1 OF 9 USPATFULL
AN 1998:17360 USPATFULL
TI Compositions and methods for topical administration of pharmaceutically active agents
IN Kanios, David P., Miami, FL, United States
Gentile, Joseph A., Plantation, FL, United States
Mantelle, Juan A., Miami, FL, United States
Sablotsky, Steven, Miami, FL, United States
PA Noven Pharmaceuticals, Inc., Miami, FL, United States (U.S. corporation)
PI US 5719197 19980217 <--
AI US 1995-477361 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1993-112330, filed on 27 Aug 1993, now patented, Pat. No. US 5446070 which is a continuation-in-part of Ser. No. US 1991-813196, filed on 23 Dec 1991, now patented, Pat. No. US 5234957 which is a continuation-in-part of Ser. No. US 1991-661827, filed on 27 Feb 1991, now abandoned , said Ser. No. US 1995-477361, filed on 7 Jun 1995 which is a continuation-in-part of Ser. No. US 1993-67001, filed on 26 May 1993 which is a continuation of Ser. No. US 1991-671709, filed on 2 Apr 1991, now patented, Pat. No. US 5300291 which is a continuation-in-part of Ser. No. US 1989-295847, filed on 11 Jan 1989, now patented, Pat. No. US 4994267 which is a continuation-in-part of Ser. No. US 1988-164482, filed on 4 Mar 1988, now patented, Pat. No. US 4814168
DT Utility
FS Granted
LN.CNT 1799
INCL INCLM: 514/772.600
INCLS: 514/781.000; 514/782.000; 424/435.000; 424/443.000
NCL NCLM: 514/772.600
NCLS: 424/435.000; 424/443.000; 514/781.000; 514/782.000
IC [6]
ICM: A61K047-32
ICS: A61K009-70
EXF 424/449; 424/435; 424/443; 424/447; 424/450; 514/772.6; 514/781-782; 514/818; 514/947
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 2 OF 9 USPATFULL
AN 97:70729 USPATFULL
TI Oral transmucosal delivery tablet and method of making it
IN Balkin, Michael S., 191 E. Main St., Huntington, NY, United States 11743

PI US 5656284 19970812 <--
AI US 1995-427439 19950424 (8)
DT Utility
FS Granted
LN.CNT 811
INCL INCLM: 424/435.000
INCLS: 424/465.000; 514/777.000
NCL NCLM: 424/435.000
NCLS: 424/465.000; 514/777.000
IC [6]
ICM: A61K009-20
EXF 424/435; 424/465; 514/777
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 3 OF 9 USPATFULL
AN 97:17918 USPATFULL
TI Compositions and methods for enhanced drug delivery
IN Hale, Ron L., Woodside, CA, United States
Lu, Amy, Los Altos, CA, United States
Solas, Dennis, San Francisco, CA, United States
Selick, Harold E., Belmont, CA, United States
Oldenburg, Kevin R., Fremont, CA, United States
Zaffaroni, Alejandro C., Atherton, CA, United States
PA Affymax Technologies N.V., Middlesex, England (non-U.S. corporation)
PI US 5607691 19970304 <--
AI US 1995-449188 19950524 (8)
RLI Continuation of Ser. No. US 1993-164293, filed on 9 Dec 1993, now abandoned which is a continuation-in-part of Ser. No. US 1993-77296, filed on 14 Jun 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-898219, filed on 12 Jun 1992, now abandoned And a continuation-in-part of Ser. No. US 1993-9463, filed on 27 Jan 1993, now abandoned
DT Utility
FS Granted
LN.CNT 5349
INCL INCLM: 424/449.000
INCLS: 604/020.000; 514/001.000; 514/002.000; 514/026.000; 514/183.000; 514/169.000; 514/553.000; 514/556.000
NCL NCLM: 424/449.000
NCLS: 514/001.000; 514/002.000; 514/026.000; 514/169.000; 514/183.000; 514/553.000; 514/556.000; 604/020.000
IC [6]
ICM: A61K009-70
ICS: A61K031-00
EXF 424/22; 424/448; 424/449; 424/485; 424/486; 604/20; 514/1; 514/2; 514/26; 514/169; 514/183; 514/553; 514/556
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 4 OF 9 USPATFULL
AN 96:94595 USPATFULL
TI Methods for modulating the human sexual response
IN Gioco, Diane-Marie, West Haven, CT, United States
Zorgniotti, deceased, Adrian, late of Wyland, MA, United States by Flavia Zorgniotti, executrix
PA Zonagen, Inc., The Woodlands, TX, United States (U.S. corporation)
PI US 5565466 19961015 <--
AI US 1994-286615 19940809 (8)
RLI Continuation of Ser. No. US 1993-106434, filed on 13 Aug 1993, now abandoned
DT Utility
FS Granted
LN.CNT 956

INCL INCLM: 514/280.000
INCLS: 514/644.000; 514/471.000; 514/649.000; 514/400.000; 514/396.000; 514/307.000; 514/509.000; 514/532.000; 514/523.000; 514/212.000
NCL NCLM: 514/280.000
NCLS: 514/212.010; 514/307.000; 514/396.000; 514/400.000; 514/471.000; 514/509.000; 514/523.000; 514/532.000; 514/644.000; 514/649.000
IC [6]
ICM: A61K031-44
EXF 514/248; 514/280; 514/684; 514/471; 514/649; 514/400; 514/396; 514/307; 514/509; 514/532; 514/523; 514/212
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 9 USPATFULL
AN 95:88260 USPATFULL
TI Ointment comprising a homogenous mixture of a polymer or copolymer of N-vinylacetamide, water and/or alcohols, and a pharmacologically active component
IN Sakai, Yasuyuki, Tokyo, Japan
Suzuki, Noriyuki, Oita, Japan
Kudo, Tetsuo, Oita, Japan
Marumo, Kuniomi, Oita, Japan
Aizawa, Toshiyuki, Oita, Japan
Imamura, Kunio, Tokyo, Japan
Sugita, Shuichi, Tokyo, Japan
Kanbayashi, Kazuo, Tokyo, Japan
PA Showa Denko Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)
PI US 5455042 19951003 <--
AI US 1994-250453 19940527 (8)
RLI Division of Ser. No. US 1993-32100, filed on 17 Mar 1993, now patented, Pat. No. US 5344655 which is a division of Ser. No. US 1991-652715, filed on 8 Feb 1991, now patented, Pat. No. US 5254338
PRAI JP 1990-60741 19900312
JP 1990-62232 19900312
JP 1990-62233 19900312
JP 1990-62234 19900312
DT Utility
FS Granted
LN.CNT 1785
INCL INCLM: 424/443.000
INCLS: 424/078.350; 424/078.310; 424/078.370; 424/445.000; 424/447.000
NCL NCLM: 424/443.000
NCLS: 424/078.310; 424/078.350; 424/078.370; 424/445.000; 424/447.000
IC [6]
ICM: A61K009-70
EXF 424/78.31; 424/78.35; 424/78.37; 424/443; 424/445; 424/447; 514/969
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 6 OF 9 USPATFULL
AN 95:78209 USPATFULL
TI Compositions and methods for topical administration of pharmaceutically active agents
IN Mantelle, Juan A., Miami, FL, United States
PA Nover Pharmaceuticals, Inc., Miami, FL, United States (U.S. corporation)
PI US 5446070 19950829 <--
AI US 1993-112330 19930827 (8)
RLI Continuation-in-part of Ser. No. US 1991-813196, filed on 23 Dec 1991, now patented, Pat. No. US 5234957 which is a continuation-in-part of Ser. No. US 1991-661827, filed on 27 Feb 1991, now abandoned
DT Utility
FS Granted
LN.CNT 2434
INCL INCLM: 514/772.600

INCLS: 424/485.000; 424/486.000; 424/487.000; 424/488.000; 514/781.000; 514/782.000
NCL NCLM: 514/772.600
NCLS: 424/485.000; 424/486.000; 424/487.000; 424/488.000; 514/781.000; 514/782.000
IC [6]
ICM: A61K047-32
EXF 424/435; 424/443; 424/447; 424/449; 424/450; 424/484; 424/485; 424/486; 424/487; 424/488; 514/772.6; 514/818; 514/947; 514/781; 514/782
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 7 OF 9 USPATFULL
AN 94:77547 USPATFULL
TI External application base or auxiliary agent and external application composition for human being or animal containing the same
IN Sakai, Yasuyuki, Tokyo, Japan
Suzuki, Noriyuki, Oita, Japan
Kudo, Tetsuo, Oita, Japan
Marumo, Kuniomi, Oita, Japan
Aizawa, Toshiyuki, Oita, Japan
Imamura, Kunio, Tokyo, Japan
Sugita, Shuichi, Tokyo, Japan
Kanbayashi, Kazuo, Tokyo, Japan
PA Showa Denko K.K., Tokyo, Japan (non-U.S. corporation)
PI US 5344655 19940906 <--
AI US 1993-32100 19930317 (8)
RLI Division of Ser. No. US 1991-652715, filed on 8 Feb 1991, now patented, Pat. No. US 5254338, issued on 19 Oct 1993
PRAI JP 1990-60741 19900312
JP 1990-62232 19900312
JP 1990-62233 19900312
JP 1990-62234 19900312
DT Utility
FS Granted
LN.CNT 1715
INCL INCLM: 424/443.000
INCLS: 424/078.350; 424/078.310; 424/078.370; 424/447.000
NCL NCLM: 424/443.000
NCLS: 424/078.310; 424/078.350; 424/078.370; 424/447.000
IC [5]
ICM: A61K009-70
EXF 424/78.31; 424/78.35; 424/78.37; 424/443; 424/445; 424/447
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 8 OF 9 USPATFULL
AN 93:87126 USPATFULL
TI External application base or auxiliary agent and external application composition for human being or animal containing the same
IN Sakai, Yasuyuki, Tokyo, Japan
Suzuki, Noriyuki, Oita, Japan
Kudo, Tetsuo, Oita, Japan
Marumo, Kuniomi, Oita, Japan
Aizawa, Toshiyuki, Oita, Japan
Imamura, Kunio, Tokyo, Japan
Sugita, Shuichi, Tokyo, Japan
Kanbayashi, Kazuo, Tokyo, Japan
PA Showa Denko K.K., Tokyo, Japan (non-U.S. corporation)
PI US 5254338 19931019 <--
AI US 1991-652715 19910208 (7)
PRAI JP 1990-60741 19900312
JP 1990-62232 19900312
JP 1990-62233 19900312

JP 1990-62234 19900312
DT Utility
FS Granted
LN.CNT 1696
INCL INCLM: 424/078.350
INCLS: 424/078.310; 424/078.370; 424/443.000; 424/447.000
NCL NCLM: 424/078.350
NCLS: 424/078.310; 424/078.370; 424/443.000; 424/447.000
IC [5]
ICM: A61K009-70
EXF 424/78; 424/443; 424/78.31; 424/78.35; 424/78.37; 424/443; 424/445; 424/447
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 9 OF 9 USPATFULL
AN 89:94199 USPATFULL
TI Azacycloalkane derivatives, absorption promoters containing the derivatives as the effective ingredient and external preparations containing the absorption promoters
IN Nakagawa, Akira, Tosu, Japan
Sakai, Michinori, Mizuma, Japan
PA Hisamitsu Pharmaceutical Co., Ltd., Tosu, Japan (non-U.S. corporation)
PI US 4882359 19891121 <--
AI US 1987-131193 19871118 (7)
PRAI JP 1986-79174 19860408
WO 1987-JP86 19870210
DT Utility
FS Granted
LN.CNT 1506
INCL INCLM: 514/947.000
INCLS: 514/946.000; 514/424.000; 514/183.000; 548/551.000; 540/451.000
NCL NCLM: 514/002.000
NCLS: 424/094.100; 424/443.000; 514/171.000; 514/183.000; 514/212.030; 514/424.000; 514/946.000; 540/451.000; 548/551.000
IC [4]
ICM: A61K031-40
ICS: A61K031-395; A61K047-00
EXF 548/551; 540/451; 514/947; 514/424; 514/183
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d l6 1-9 kwic

L6 ANSWER 1 OF 9 USPATFULL
PI US 5719197 19980217 <--
SUMM . . . On the other hand, the presence of the anesthetic agent primarily in crystalline form may irritate sensitive tissues such as **mucosal** tissues. This is particularly true with regard to lidocaine.
SUMM In accordance with one embodiment of the present invention, a pharmaceutically acive agent and a plasticizer for the **adhesive** are in admixture with a pharmaceutically acceptable **adhesive**, which is preferably a bioadhesive, and more preferably a polysaccharide bioadhesive, and a cohesiveness increasing amount of clay, is provided.
. .
SUMM . . . that the addition of a clay to a bioadhesive results in an increase in viscosity, swelling and gelling of the **adhesive** matrix such that it permits reduction of the amount of bioadhesive on greater than a weight for weight basis.
SUMM Preferably the pharmaceutically active agent is substantially dissolved in the solvent so that when mixed with the finite **adhesive** or non-finite fluid carrier, the agent is microdispersed in the

composition.

SUMM . . . substantially free of crystals of anesthetic agent and the amount of solvent used is not sufficient to undesirably affect the **adhesive** properties of the finite composition. Thus, the single ingredient anesthetic agent contains a therapeutically effective amount of anesthetic agent within. . .

SUMM As a general rule, in the case of a given tissue, e.g. the **mucosal** application, the anesthetic drug selected, the concentration and thickness and the duration of the application is determined based upon the. . .

SUMM . . . desired duration of action; and (3) the desired rapidity of anesthetic effect. As a general rule in the case of **mucosal** application, the ratios of base to salt are such that the free base form preferably should penetrate the mucosa and. . .

SUMM . . . buccal mucosa's hydrophilicity, as compared to the stratum corneum of intact skin. Generally, the higher the lipid content of the **mucosal** membrane, the more rapidly the base form of the anesthetic agent will be absorbed. Therefore, when the composition is used for application to oral or buccal mucosa, the different lipid contents of the **gum** (gingiva) and the alveolar mucosa must be kept in mind in order to obtain the optimal penetration rate.

SUMM . . . which is not lipid soluble, penetrates to the lipo-protein nerve membrane only after the buffering capacity of the skin or **mucosal** tissue converts the salt to the base, the final result being a delayed onset of anesthesia.

SUMM . . . carrier including liquids, semi-liquids or solid carriers, such as a bioadhesive. Thus, the active agents may be admixed with a non-**adhesive** tape or other finite carrier or a carrier such as a cream, gel, emulsion, lotion, salve, paste, plaster, ointment, spray-solution,. . .

SUMM Contrary to the typical method for manufacturing a drug in a solvent containing **adhesive**, the **adhesive** composition of this invention contains a non-volatile solvent. Thus the composition is either not dried to prevent removal of the solvent from the **adhesive** or a solvent is used at least part of which is not substantially evaporated during the conditions of manufacture. The. . .

SUMM . . . anesthetic agents are dissolved in a solvent, preferably a polyhydric alcohol, and then the resulting mixture is added to an **adhesive** prior to being placed onto the flexible form or backing. In another embodiment, the resulting mixture is an cream, gel,. . .

SUMM Suitable **adhesive** carriers include any of the non-toxic polymers, particularly those of the type used to carry drugs for transdermal delivery including. . . isoprene block copolymers, acrylics, urethanes, silicones, styrene butadiene copolymers, methyl acrylate copolymers, acrylic acid, polyacrylates, and polysacchrides such as, karaya **gum**, tragacanth **gum**, pectin, guar **gum**, cellulose, and cellulose derivatives such as methyl cellulose, propyl cellulose, cellulose acetate and the like, along with other substances known. . .

SUMM The **adhesive** can be modified so as to adhere to the skin or **mucosal** tissue, depending on the intended application site. As stated above, preferred adhesives for application to the skin are bioadhesives.

SUMM The term "**adhesive**" as used herein means a substance, inorganic or organic, natural or synthetic, that is capable of surface attachment to the. . .

SUMM The term "bioadhesive" as used herein means an **adhesive** which attaches and preferably strongly attaches to a live or freshly killed biological surface such as skin or **mucosal** tissue upon hydration. Indeed, to qualify as a bioadhesive, a substance must be

capable of maintaining adhesion in moist or wet in in vivo or in vitro environments. The final finite composition of the present invention is "self-**adhesive**" in that it attaches to the site of interest without the need to reinforce its attachment by way of another **adhesive** which is applied to a backing.

SUMM . . . are pectin, a mixture of sulfated sucrose and aluminum hydroxide, hydrophilic polysaccharide gums such as natural plant exudates, including karaya **gum**, ghatti **gum**, tragacanth **gum**, xanthan **gum**, jaraya **gum** and the like, as well as seed gums such as guar **gum**, locust bean **gum**, psillium seed **gum** and the like. The term non-finite carrier refers to any liquid or semi liquid known for or suitable for use. . .

SUMM

Ingredient	Typical Range (% by weight)	Preferred Range (% by weight)	Optimum Range (% by weight)
Finite Form			
Adhesive	15 to 60	20 to 50	20 to 35
Solvent(with plast.)	2 to 75	5 to 70	20 to 40
Drug(s)	1. . .		

SUMM wherein the composition is substantially water insoluble and self-**adhesive**; and wherein the pharmaceutically active agent is present in non-crystallized from in the composition.

SUMM . . . whole composition. More preferably, the bioadhesive composition of this method is comprised of 20 to 40 weight percent of karaya **gum**, about 20 to 40 weight percent of at least one glycol, and about 10 to 25 weight percent of lidocaine. . .

SUMM In one embodiment, the composition of the invention comprises about 20 to 35 weight percent of karaya **gum**, about 20 to 40 weight percent of at least one glycol, about 10 to 25 weight percent of lidocaine base,. . .

SUMM In another embodiment, the composition of the invention comprises about 10 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, and further comprising. . .

SUMM In another embodiment, the composition of the invention comprises about 7 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, and further comprising. . .

SUMM In another embodiment, the composition of the invention comprises about 5 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, 2 percent Bentonite,. . .

SUMM In another embodiment, the composition of the invention comprises about 5 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, 2 percent Bentonite,. . .

DETD

Ingredient	w/w %			
Lidocaine base	8.0	8.0	8.0	8.0
Dipropylene Glycol	5.0	5.0	5.0	5.0
60% Lecithin in Propylene Glycol	8.0	8.0	8.0	8.0
Karaya **Gum**	10.0	7.0	5.0	5.0
Bentonite	0	0	2.0	2.0

(Polargel NF*)
Zinc Oxide 0 0 0 0.1
Glycerin 6.0 6.0 6.0 6.0

*Available from. . .

DETD . . . of the drug is dissolved. The solution is then cooled to 20.degree. to 35.degree. C. prior to adding the karaya **gum** and clay. Once the karaya **gum** and clay is added, the final composition are applied to a suitable backing material such as a non-woven, polyester film. . .

DETD **Nicotinic Acid** Derivatives Aluminum Nicotinate, Acipimox, Niceritrol, Nicoclonate, Nicomol, Oxiniacic Acid

CLM What is claimed is:

9. The composition of claim 8, wherein the **gum** is selected from the group consisting of karaya **gum**, tragacanth **gum**, pectin **gum**, xanthan **gum**, guar **gum**, cellulose, and cellulose derivatives.

14. The composition of claim 1 comprising about 20 to 35 weight percent of karaya **gum**, about 20 to 40 weight percent of at least one glycol, about 10 to 25 weight percent of lidocaine base,. . .

15. The composition of claim 1 comprising about 10 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, and further comprising. . .

16. The composition of claim 1 comprising about 7 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, and further comprising. . .

17. The composition of claim 1 comprising about 5 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, 2 percent Bentonite,. . .

18. The composition of claim 1 comprising about 5 weight percent of karaya **gum**, about 13 weight percent of at least one glycol, and about 8 weight percent of lidocaine base, 2 percent Bentonite,. . .

L6 ANSWER 2 OF 9 USPATFULL

PI US 5656284 19970812 <--

AB . . . tablet is placed between the upper lip mucosa and the opposite gingiva mucosa, and is held in place without any **adhesive**, by virtue of a snug fit and the elasticity of the tablet. The tablet is made from an organic polymer,. . .

SUMM The buccal tablets and patches described so far were adhered to the cheek or the **gum**, and provided for direct delivery of the pharmaceutical carried by the tablet or patch through only a single mucosa, either. . . mouth to positively hold them in place adjacent an oral mucosa over long periods of time. The use of an **adhesive** imposes five limitations on a buccal tablet or patch. First, the **adhesive**, e.g., a hydrogel self-**adhesive**, with which such tablets are adhered in the mouth may inflame or damage the buccal mucosa over prolonged use. Even. . . in the mouth, it may interfere with absorption of a pharmaceutical particularly with prolonged use. Secondly, the use of an **adhesive** limits absorption to only one **mucosal** surface, the one to which the **adhesive** is attached. Thirdly, the **adhesive**, unless it is permeable, reduces the amount of surface area available for drug absorption across the one **mucosal** surface in contact with the buccal tablet. Fourthly, the use of an **adhesive** adds to the complexity and expense of fabricating a buccal tablet. Fifthly, the use of an **adhesive** system reduces the volume of the buccal tablet that can

be devoted to containing the drug and thus reduces its. . .

SUMM . . . relatively quickly; can sustain delivery of therapeutically effective levels of a pharmaceutical over time; can allow a greater amount of **mucosal** surface to be used for absorption than previously described buccal tablets or patches; and is simple and inexpensive to fabricate.

SUMM . . . of the invention to provide such a tablet which may be maintained in place in the mouth without a separate **adhesive** or a self-**adhesive**.

SUMM . . . opposed gingiva mucosa remains there solely by virtue of its size and the fit, and does not require a separate **adhesive** or a self-**adhesive** to there it in the mouth, which simplifies tablet manufacture, facilitates at least bi-directional delivery of the pharmaceutical held in. . .

SUMM . . . The elasticity of the tablet contributes to holding it in place between the opposed lip and gingiva mucosa without an **adhesive** . Suitable gels are those which are elastic enough for a comfortable fit, have suitable gel strength, and also hold suitable. . .

SUMM . . . polymers to form these gels are those from the following groups: agarose, agar, agar derivatives, carrageenans, algin, furcellaran, pectins, xanthan **gum** and locust bean **gum** , with agarose being the presently preferred organic polymer. Other organic polymers which form gels that satisfy the criteria described herein. . .

SUMM . . . J., Gen. Virol 1979; 12:325-29.) Thus in addition to pharmaceutical molecules, liposomes can be transported in the tablet to the **mucosal** surface. Entirely surrounded by buccal mucosa that has a very high blood flow rate (2.4 ml/min/cm.sup.2 in the Rhesus monkey;. . .

SUMM . . . sulfonamides, sulfones, nitrofurantoin, para-aminosalicylic acid, griseofulvin, ketcochazole, flursosine, vidarabine; also cardiovascular drugs such as amiodarone, captopril, disopyramide, furosemide, hydralazine, methyldopa, **nicotinic acid**, nifedipine, procainamide, quinidine and verapamil; also miscellaneous drugs including vitamin A, ranitidine, cimetidine, levodopa and isotretinoin. A specific combination of. . .

CLM What is claimed is:

. . . is not readily soluble in saliva and a pharmaceutical carried by the excipient, the tablet being provided without a separate **adhesive** or self-**adhesive** and sized to fit snugly between and in contact with both a lip mucosa and an opposed gingiva mucosa so. . .

. . . sized to be held between a lip mucosa and an opposed gingiva mucosa without being adhered thereto by a separate **adhesive** or a self-**adhesive** which would otherwise adhere the tablet to the either or both the lip mucosa or the opposed gingiva mucosa, the. . .

. . . water and an organic polymer selected from the group consisting of agarose, agar, agar derivatives, carrageenans, algin, furcellaran, pectins, xanthan **gum** and locust bean **gum**.

. . . water and an organic polymer selected from the group consisting of agarose, agar, agar derivatives, carrageenans, algin, furcellaran, pectins, xanthan **gum** and locust bean **gum**.

. . . delivering a pharmaceutical transmucosally to a human, comprising an excipient not readily soluble in saliva and not including a separate **adhesive** or self-**adhesive**, and a pharmaceutical carried by the excipient, the tablet being sized to fit snugly between and in contact with a. . . water and an organic polymer selected from the group consisting of agarose, agar, agar derivatives, carrageenans, algin, furcellaran, pectins, xanthan **gum** and locust bean **gum**, the tablet having a structure which permits the pharmaceutical carried by the excipient to be delivered from the tablet

at. . .
. . . water and an organic polymer selected from the group consisting of agarose, agar, agar derivatives, carrageenans, algin, furcellaran, pectins, xanthan **gum** and locust bean **gum**, the tablet having a structure which permits the pharmaceutical carried by the excipient to be delivered from the tablet to. . .

L6 ANSWER 3 OF 9 USPATFULL
PI US 5607691 19970304 <--
AB The present invention relates to methods of delivering pharmaceutical agents across membranes, including the skin layer or **mucosal** membranes of a patient. A pharmaceutical agent is covalently bonded to a chemical modifier, via a physiologically cleavable bond, such. . .
SUMM a) administering to a patient's skin or **mucosal** membrane with a therapeutically effective amount of a pharmaceutical agent-chemical modifier complex, wherein the complex is formed by the binding. . .
DETD . . . the passage of a substance across or through the skin (i.e., transdermal), including the epidermis and dermis, or across a **mucosal** membrane (i.e., gastrointestinal, sublingual, buccal, nasal, pulmonary, vaginal, corneal, and ocular membranes), where the substance can contact, and be absorbed. . .
DETD "Iontophoresis" or "iontophoretic" refers to the introduction of an ionizable chemical through skin or **mucosal** membranes by the application of an electric field to the interface between the ionizable chemical compound and the skin or **mucosal** membrane.
DETD **Nicotinic acid** or niacin functions in the body as a component of two hydrogen transporting coenzymes. In addition to its functions as a vitamin, **nicotinic acid** exerts several distinctive pharmacological effects which vary according to the dosage level employed. **Nicotinic acid**, in large doses, causes a reduction in serum lipids. **Nicotinic acid** is a nitrogen heterocycle having a hydroxyl group.
DETD A variety of types of transdermal patches will find use in the methods described herein. For example, a simple **adhesive** patch can be prepared from a backing material and an acrylate **adhesive**. The pharmaceutical agent-chemical modifier complex and any enhancer are formulated into the **adhesive** casting solution and allowed to mix thoroughly. The solution is cast directly onto the backing material and the casting solvent is evaporated in an oven, leaving an **adhesive** film. The release liner can be attached to complete the system.
DETD . . . the pharmaceutical agent-chemical modifier complex. The layers of this patch comprise a backing, a polyurethane drug/enhancer matrix, a membrane, an **adhesive**, and a release liner. The polyurethane matrix is prepared using a room temperature curing polyurethane prepolymer. Addition of water, alcohol,. . .
DETD . . . drug, and several hydrophilic polymers. This hydrogel matrix can be incorporated into a transdermal patch between the backing and the **adhesive** layer.
DETD . . . patch comprises an impermeable or semipermeable, heat sealable backing material, a heat sealable membrane, an acrylate based pressure sensitive skin **adhesive**, and a siliconized release liner. The backing is heat sealed to the membrane to form a reservoir which can then. . .
DETD . . . backing is a strip or patch capable of being secured to the skin, typically with the matrix acting as an **adhesive**. In such constructions, the backing will usually be impermeable to the complex. This impermeability inhibits the loss of the complex.. . .
DETD The delivery device can be held in place with the **adhesive** of the matrix, with an **adhesive** along the perimeter of the matrix, with tape or elastic, or any other means, so long as the device allows. . .

DETD . . . delivery, the methods of the present invention are also applicable to the enhanced transport and delivery of pharmaceutical agents through **mucosal** membranes, such as gastrointestinal, sublingual, buccal, nasal, pulmonary, vaginal, corneal, and ocular membranes. See, e.g., Mackay et al. (1991) Adv. Drug Del. Rev, 7:313-338. Specifically, there are many similarities between skin and **mucosal** membranes. For example, the membrane of the buccal cavity is non-keratinized. However, the buccal membrane is similar to the skin. . .

DETD . . . Transmucosal drug dosage forms (e.g., tablet, suppository, ointment, gel, pessary, membrane, and powder) are typically held in contact with the **mucosal** membrane and disintegrate and/or dissolve rapidly to allow immediate systemic absorption.

DETD . . . (as described in U.S. Pat. No. 4,806,356); and encapsulation. Another oral formulation is one that can be applied with an **adhesive**, such as the cellulose derivative, hydroxypropyl cellulose, to the oral mucosa, for example as described in U.S. Pat. No. 4,940,587. This buccal **adhesive** formulation, when applied to the buccal mucosa, allows for controlled release of the pharmaceutical agent-chemical modifier complex into the mouth. . .

DETD To a 0.degree. C. suspension of **nicotinic acid** (2 g, 16.2 mmol) in dichloromethane and DMF (2 drops)was added oxalyl chloride (8.25 g, 65 mmol). The ice bath. . .

DETD . . . mixture was stirred at room temperature for 1.5 hours and then diluted with ether (30 ml) to precipitate an oily **gum**. The ether layer was decanted and the residue triturated several times with fresh ether to give a solid which, after. . .

L6 ANSWER 4 OF 9 USPATFULL

PI US 5565466 19961015 <--

SUMM . . . non-invasively administering drugs having cardiovascular or renal vascular activity through use of a lollipop assertedly facilitating drug absorption through the **mucosal** tissues of the mouth, pharynx, and esophagus. The Stanley et al. patent proposes that a large number of lollipop-administered drugs. . .

DETD **Nicotinic acid** (or nicotinyl alcohol) has a direct vasodilating activity useful in the practice of the present invention. Also contemplated is the. . .

DETD . . . with a variety of pharmaceutical excipients including binders such as gelatin and/or corn starch or pharmaceutically acceptable gums such as **gum** tragacanth. Vasoactive agents may also be combined in a hard candy (which may be dissolved in the mouth) or in a chewing **gum**, to provide buccal or sublingual delivery to the oral mucosa.

DETD . . . an effective amount of a vasodilator. The filter paper strip or disc may then be placed between the cheek and **gum** (buccally) for delivery to the vasculature of the genitalia without encountering first-pass effects. Other transmucosal delivery systems such as lollipops. . .

DETD . . . disposed between the reservoir and the skin. Ethylene-vinyl acetate copolymers and other microporous membranes may also be used. Typically, an **adhesive** layer is provided which may comprise an **adhesive** formulation such as mineral oil and polyisobutylene combined with the vasoactive agent.

DETD . . . may comprise three layers: (1) an outer layer comprising a laminated polyester film; (2) a middle layer containing a rate-controlling **adhesive**, a structural non-woven material and the vasodilator; and (3) a disposable liner that must be removed prior to use. Transdermal. . .

DETD . . . by methods well known in the art to improve their lipid solubility and thus their ability to penetrate skin or **mucosal** surfaces.

DETD The results show that, within five minutes of placing the tablet between the cheek and **gum**, arterial velocity rose by more than 50% above base line velocity. Within 25 minutes, arterial velocity peaked at more than. . .

DETD Patients were asked to place one tablet between the cheek and **gum** (buccal) 10-20 minutes before attempting coitus. Buccal administration was used as a paradigm of transmucosal delivery which, like all routes. . .

DETD . . . the drug and which strips were placebo. Patients were told to place one filter paper strip between the cheek and **gum** 10 minutes to 20 minutes prior to attempts to achieve erection. The treatment was deemed successful if an erection sufficient. . .

DETD **Nicotinic acid** (or nicotinyl alcohol) has a direct vasodilating activity which is useful in the practice of the present invention. Papaverine is. . .

CLM What is claimed is:

. . . on demand by administering an effective amount of the agent by a route selected from the group consisting of oral **mucosal**, intranasal, and rectal.

7. The improvement of claim 6 wherein the route of administration is oral **mucosal**.

9. In a method for improving sexual responsiveness in an impotent male by administering a vasodilator agent to circulation in. . . on demand by administering an effective amount of the agent by a route selected from the group consisting of oral **mucosal**, intranasal, and rectal.

L6 ANSWER 5 OF 9 USPATFULL

PI US 5455042 19951003 <--

SUMM . . . such as ointment agents (ointment, hydrogel, jelly or cream), plastering agents (molded poultice, tape agent or plaster agent), sticky (or **adhesive**) bandages (sticky bandage, strap, wound strap, surgical tape, taping material, supporter), and to preparations for external application containing same.

SUMM To solve these problems, hydrogel bases containing water-soluble polymers such as polyacrylic acid, starch, **gum** tragacanth, alginic acid, and cellulose derivatives formulated therein are employed. Particularly, hydrous gel bases containing water and polyacrylic acid, alcohols,. . .

SUMM . . . effect due to a backing material, and can formulate a pharmacologically active ingredient at a high concentration within a thin **adhesive** layer about 10 .mu.m thick, and therefore, has an excellent absorbability of a pharmacologically active ingredient and is used for. . .

SUMM 2) the method of preventing a steaming eruption of skin by making the **adhesive** layer porous and adding a water-soluble polymeric substance such as a cellulose derivative, to thereby enhance the water vapor permeability of the **adhesive** layer (e.g., Japanese Unexamined Patent Publications (Kokai) Nos. 49-97058, 59-232553);

SUMM 3) the method of using an **adhesive** having an enhanced hydrophilic property, such as acrylic copolymers having ether groups, (methacrylamide copolymers, mixtures of styrene-isoprene block copolymers and. . .

SUMM 4) the method of lowering the adhering force by using as the **adhesive** a polymer composed of fine particles (e.g., Japanese Unexamined Patent Publication (Kokai) No. 61-234865);

SUMM 6) the method of extracting low molecular weight components in the **adhesive** layer with an alcohol (e.g., Japanese Unexamined Patent Publication (Kokai) No. 52-75062);

SUMM . . . acid is formulated in an amount which enables it to function as a hydrous base, a marked lowering in the **adhesive** force occurs, and thus the adhesion during plastering is often poor. In addition, since a water-soluble polymer is formulated into a non-water-soluble **adhesive** inherently having no compatibility, a phase separation occurs during the coating of the **adhesive** layer, and thus problems arise such that the moldability and working efficiency are worsened.

SUMM Also, ethanol and isopropanol have sterilizing and disinfecting actions, and if these can be formulated into the **adhesive**, the prevention of skin irritation by bacterial proliferation as well as the effects of a sterilization and disinfection of wounded. . .

SUMM . . . 5 cps, a liquid sag of the ointment and a worsening of the moldability of the plastering agent and the **adhesive** bandage will occur.

SUMM . . . disease therapeutics such as bufexamac, crotamiton, tolnaftate, clotrimazole, isoconazole; vitamins such as retinol, alfacalcidol, thiaminepyrophosphoric acid, riboflavin tetrabutyrate, pyridoxal phosphate, **nicotinic acid**, pantethine, hydroxocobalamin acetate, ascorbic acid, phosphoric ascorbate, tocopherol acetate, menatetranone, phytonadione; ophthalmic agents such as pilocarpine, physostigmine, atropine, hemostatics such. . .

SUMM . . . can be used without particular limitation, and is exemplified by an ethylene-vinyl acetate copolymer and an acrylic or rubbery pressure-sensitive **adhesive**.

SUMM (2) since the adhesion force is weaker than that of the alkyl acrylate type or the rubber type **adhesive**, a mechanical peel-off of skin keratin can be prevented;

SUMM (3) since the adhesion force is stronger than the poultice of the prior art using sodium polyacrylate as the **adhesive**, the base thickness can be made thinner;

SUMM . . . as liquid coating agents or aerosols, or external preparations other than for skin (preparations for buccal, nasal, ophthalmic, rectal, vagina **mucosal** applications), to utilize the specific features as described above.

DETD . . . described above, it is clear that the base composition for external application according to the present invention has a sufficient **adhesive** force to the skin, and alleviates irritation of the skin, enhances the absorbability of a wide range of water-soluble and. . .

L6 ANSWER 6 OF 9 USPATFULL

PI US 5446070 19950829 <--

SUMM . . . On the other hand, the presence of the anesthetic agent primarily in crystalline form may irritate sensitive tissues such as **mucosal** tissues. This is particularly true with regard to lidocaine.

SUMM U.S. Pat. No. 4,894,232 to Reul, et al. discloses a base for **mucosal** or denture **adhesive** pastes and a process for the preparation thereof. Lidocaine is one possible therapeutic agent suitable for this paste.

SUMM . . . Pat. No. 3,814,095 to Lubens describes an absorbent pad for topical application of an anesthetic agent and having a peripheral **adhesive**.

SUMM . . . for prolonged and sustained delivery of an active ingredient in a buccal cavity. Specifically a hydratable mucoadhesive base layer, a non-**adhesive** reservoir layer and a water-impermeable carrier film sandwiched between and bonded to the base layer and the reservoir layer form the trilaminate film. This reference generally describes and claims the addition of an active ingredient to the non-**adhesive** reservoir layer.

SUMM . . . anesthetic agent as high as 50% by weight can be achieved in a

system in which the adhesion of the **adhesive** carrier is not hindered. Prolongation of anesthesia can thus be achieved by increasing the amount of time the composition is. . .

DETD In accordance with one embodiment of the present invention, a pharmaceutically acive agent and a plasticizer for the **adhesive** are in admixture with a pharmaceutically acceptable **adhesive**, which is preferablya bioadhesive, and more preferably a polysaccharide bioadhesive, is provided in a finite, flexible form for topical application. . .

DETD Preferably the pharmaceutically active agent is substantially dissolved in the solvent so that when mixed with the finite **adhesive** or non-finite fluid carrier, the agent is microdispersed in the composition.

DETD . . . is substantially free of crystals of anesthetic agent and the amount of solvent used is notsufficient to undesirably affect the **adhesive** properties of the finite composition. Thus, the single ingredient anesthetic agent contains a therapeutically effective amount of anesthetic agent within. . .

DETD As a general rule, in the case of a given tissue, e.g. the **mucosal** application, the anesthetic drug selected, the concentration and thicknessand the duration of the application is determined based upon the anesthetic's. . .

DETD . . . desired duration of action; and (3) the desired rapidity of anesthetic effect. As a general rule in the case of **mucosal** application, the ratios of base to salt are such that the free base form preferably should penetrate the mucosa and. . .

DETD . . . buccal mucosa's hydrophilicity, as compared to the stratum corneum of intact skin. Generally, the higher the lipid content of the **mucosal** membrane, the more rapidly the base form of the anesthetic agent will be absorbed. Therefore,when the composition is used for application to oral or buccal mucosa, the different lipid contents of the **gum** (gingiva) and the alveolar mucosa mustbe kept in mind in order to obtain the optimal penetration rate.

DETD . . . which is not lipid soluble, penetrates to the lipo-protein nerve membrane only after the buffering capacity of the skin or **mucosal** tissue converts the salt to the base, the final result being a delayed onset of anesthesia.

DETD . . . carrier including liquids, semi-liquids or solid carriers, such as a bioadhesive. Thus, the active agents may be admixed with a non-**adhesive** tape or other finite carrier or a carrier such as a cream, gel, emulsion, lotion, salve, paste, plaster, ointment, spray-solution,. . .

DETD Contrary to the typical method for manufacturing a drug in a solvent containing **adhesive**, the **adhesive** composition of this invention contains anon-volatile solvent. Thus the composition is either not dried to prevent removal of the solvent from the **adhesive** or a solvent is used at least part of which is not substantially evaporated during the conditions of manufacture. The. . .

DETD . . . anesthetic agents are dissolved in a solvent, preferably a polyhydric alcohol, and then the resulting mixture is added to an **adhesive** prior to being placed onto the flexible form or backing. In another embodiment, the resulting mixture is an cream, gel,. . .

DETD Suitable **adhesive** carriers include any of the non-toxic polymers, particularly those of the type used to carry drugs for transdermal delivery including. . . isoprene block copolymers, acrylics, urethanes, silicones, styrene butadiene copolymers, methyl acrylate copolymers, acrylic acid, polyacrylates, and polysacchrides such as, karaya **gum**, tragacanth **gum**, pectin, guar **gum**, cellulose, and cellulosederivatives such as methyl cellulose, propyl cellulose, cellulose acetate and the like, along with

other substances known for. . .

DETD The **adhesive** can be modified so as to adhere to the skin or **mucosal** tissue,depending on the intended application site. As stated above, preferred adhesives for application to the skin are bioadhesives.

DETD The term "**adhesive**" as used herein means a substance, inorganic or organic,natural or synthetic, that is capable of surface attachment to the intendedapplication. . .

DETD The term "bioadhesive" as used herein means an **adhesive** which attaches and preferably strongly attaches to a live or freshly killed biological surface such as skin or **mucosal** tissue upon hydration. Indeed, to qualify as a bioadhesive, a substance must be capable of maintaining adhesion in moist or wet in in vivo or in vitro environments. The final finite composition of the present invention is "self-**adhesive**" in that it attaches to the site of interest without the need to reinforce its attachment by way of another **adhesive** which is applied to a backing.

DETD . . . are pectin, a mixture of sulfated sucrose and aluminum hydroxide, hydrophilic polysaccharide gums such as natural plant exudates, including karaya **gum**, ghatti **gum**, tragacanth **gum**, xanthan **gum**, jaraya **gum** and the like, as well as seed gums such as guar **gum**, locust bean **gum**, psillium seed **gum** and the like. The term non-finite carrier refers to any liquid or semi liquid known for or suitable for use. . .

DETD

Ingredient	Typical Range (% by weight)	Preferred Range (% by weight)	Optimum Range (% by weight)
Finite Form			
Adhesive	15 to 60	20 to 50	20 to 35
Solvent (with plast.)	2 to 75	5 to 70	20 to 40
Anesthetic. . .			

DETD . . . about 50 weight percent based on the weight of the whole composition; wherein the composition is substantially water insoluble and self-**adhesive**; and wherein the pharmaceutically active agent is present innon-crystallized from in the composition.

DETD . . . whole composition. More preferably, the bioadhesive composition of this method is comprised of 20 to 34 weight percent of karaya **gum**, about 20 to 53 weight percent of at least one glycol, and about 10 to 25 weight percent of lidocaine. . .

DETD

Ingredient	% (w/w)
Adhesive (karaya **gum**)	21
Binder (lecithin)	11
Solvent (propylene glycol)	7
Solvent (glycerin)	19
Anesthetic agent base (lidocaine base)	28
Anesthetic agent salt (prilocaine hydrochloride)	14

DETD . . . all of the drug is dissolved. The solution is then cooled to 20.degree. to 35.degree. C. prior to adding thekaraya **gum**.

Once the karaya **gum** is added, the final composition is applied to a suitable backing material such as a non-woven, polyester film (for example,. . .

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	30
Solvent (glycerin)	30
Solvent (propylene glycol)	39
Anesthetic agent base (lidocaine base)	0.7
Anesthetic agent salt (prilocaine hydrochloride)	0.3

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	21
Binder (lecithin)	4
Solvent (propylene glycol)	3
Solvent (isocetyl alcohol)	7
Solvent (glycerin)	26
Anesthetic agent base (lidocaine base)	26
Anesthetic agent salt (tetracaine hydrochloride)	

. . .

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	27
Solvent (propylene glycol)	29
Solvent (glycerin)	4
Anesthetic agent base (lidocaine base)	28
Anesthetic agent salt (dyclonine hydrochloride)	12

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	26
Binder (lecithin)	10
Solvent (propylene glycol)	7
Solvent (butylene glycol)	17
Solvent (glycerin)	10
Anesthetic agent base (lidocaine base)	20
Anesthetic agent salt (dyclonine hydrochloride)	

. . .

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	27
Binder (lecithin)	12
Solvent (propylene glycol)	8
Solvent (glycerin)	13

Anesthetic agent base (lidocaine base)
27
Anesthetic agent salt (bupivacaine hydrochloride)
13

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	27
Binder (lecithin)	12
Solvent (propylene glycol)	8
Solvent (glycerin)	13
Anesthetic agent base (lidocaine base)	13
Anesthetic agent salt (bupivacaine hydrochloride)	27

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	21
Binder (lecithin)	11
Solvent (propylene glycol)	7
Solvent (glycerin)	19
Anesthetic agent base (lidocaine base)	28
Anesthetic agent salt (mepivacaine hydrochloride)	14

DETD Ingredient	% (w/w)
Adhesive (Carbopol 934P, a polycarboxylic acid sold by B. F. Goodrich Chemical Company)	20
Solvent (propylene glycol)	15
Solvent (glycerin)	20
Anesthetic agent base (lidocaine. . .	

DETD Ingredient	% (w/w)
Adhesive (karaya **gum**)	24
Solvent (propylene glycol)	3
Adhesive (glycerin)	14
Solvent (isocetyl alcohol)	7
Binder (lecithin)	4
Anesthetic agent base (lidocaine base)	32
Anesthetic agent salt (tetracaine hydrochloride)	16

DETD Ingredient	% (w/w)
Adhesive (tragacanth **gum**)	24
Adhesive (pectin)	5
Solvent (propylene glycol)	12
Solvent (glycerin)	12
Anesthetic agent base (mepivacaine base)	

Anesthetic agent salt (lidocaine hydrochloride)
12

DETD

Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	33
Binder (lecithin)	9
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	15
Solvent (glycerin)	17
Anesthetic agent base (lidocaine base)	20

DETD . . . the drug is dissolved. The solution is then chilled to about 20.degree. to 40.degree. C. prior to adding the karaya **gum**. Once the karaya **gum** is added, the final compositionis applied to a suitable backing material such as a non-woven polyester film (for example the. . . its final solid form. This gel can be directly applied to the oral mucosa or overlaid with a skin contact **adhesive** for skin adhesion.

DETD

Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	33
Binder (lecithin)	5
Solvent (propylene glycol)	7
Solvent (dipropylene glycol)	12
Solvent (glycerin)	33
Anesthetic agent base (lidocaine base)	10

DETD

Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	35
Binder (lecithin)	5
Solvent (propylene glycol)	7
Solvent (dipropylene glycol)	12
Solvent (glycerin)	36
Anesthetic agent base (lidocaine base)	5

DETD

Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	30
Binder (lecithin)	9
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	

	15
Solvent (glycerin)	15
Anesthetic agent base (lidocaine base)	25

DETD	
Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	20
Binder (lecithin)	9
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	10
Solvent (glycerin)	10
Solvent (benzyl alcohol)	5
Anesthetic agent base (lidocaine base)	40

DETD	
Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	25
Binder (lecithin)	8
solvent (isocetyl alcohol)	5
Solvent (propylene glycol)	12
Solvent (glycerin)	10
Anesthetic agent base (prilocaine base)	40

DETD	
Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	25
Binder (lecithin)	4
Solvent (propylene glycol)	6
Solvent (benzyl alcohol)	10
Solvent (dipropylene glycol)	10
Solvent (glycerin)	5
Anesthetic agent base (tetracaine base)	40

DETD	
Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	30
Binder (lecithin)	8
Solvent (propylene glycol)	12
Solvent (dipropylene glycol)	25
Solvent (benzyl alcohol)	

	5
Solvent (glycerin)	10
Anesthetic agent base (dibucaine base)	10

DETD Ingredient	% (w/w)
Bioadhesive (karaya **gum**)	28
Bioadhesive (Carbopol 934)	2
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	15
Solvent (glycerin)	15
Binder (lecithin)	9
Anesthetic agent base (lidocaine base)	25

DETD Ingredient	% (w/w)
Bioadhesive (tragacanth **gum**)	27
Bioadhesive (pectin)	6
Binder (lecithin)	9
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	15
Solvent (glycerin)	17
Anesthetic agent base (lidocaine base)	20

DETD Ingredient	% (w/w)
Bioadhesive (xanthan **gum**)	27
Bioadhesive (pectin)	6
Binder (lecithin)	9
Solvent (propylene glycol)	6
Solvent (dipropylene glycol)	15
Solvent (glycerin)	17
Anesthetic agent base (lidocaine base)	20

DETD Ingredient	% (w/w)
Drug (miconazole nitrate)	2
Solvent (Propylene glycol)	67
Thickener (hydroxymethylcellulose)	1
Adhesive (karaya **gum**)	30
Anesthetic agent base (lidocaine base)	

DETD . . . and mixed until dissolved. The sample is then cooled to approximately 20.degree. to 35.degree. C. prior to adding the karaya **gum**. Once the karaya **gum** is added, the formulation is applied to a sheet of backing material, then theindividual dosage forms are cut to the. . .

DETD . . . Sensitivity Treatment Agent

	5	10	5	5
(potassium nitrate)				
Solvent (glycerin)	42	37	38	40
Solvent (dipropylene glycol)	11	11	15	15
Bioadhesive (karaya **gum**)	42	42	42	40

DETD . . . (hydrocortisone)

	1	1	0.5	0.5	2.0
Solvent (dipropylene glycol)	15	15	15.5	11.5	15
Solvent (glycerin)	42	42	42	40	34
Bioadhesive (karaya **gum**)	42	26	26	48	34
Bioadhesive (xantham **gum**)	--	16	16	--	--
Binder (lecithin)	--	--	--	--	10
Solvent (propylene glycol)	--	--	--	--	5

DETD . . . 0.05 0.1

Solvent (propylene glycol)	33.28	18.28	20.00	32.3
Solvent (dipropylene glycol)	0.0	15.00	13.28	0.0
Solvent (glycerin)	33.33	33.33	33.33	33.3
Bioadhesive (karaya **gum**)	33.34	33.34	28.34	33.4
Bioadhesive (guar **gum**)	0.0	0.0	5.00	0.0

DETD

	% (w/w)
Adrenocorticosteroid (betamethasone dipropionate)	0.05
Solvent (propylene glycol)	33.28
Solvent (glycerin)	33.33
Bioadhesive (karaya **gum**)	33.34

DETD . . . 0.05

(betamethasone dipropionate)				
Solvent (dipropylene glycol)	15.00	15.00	15.00	10.00
Solvent (propylene glycol)	15.00	15.00	15.00	15.00
Solvent (glycerin)	30.95	30.95	30.95	38.00
Bioadhesive (karaya **gum**)				

38.0 0.0 0.0 35.95
Bioadhesive (xantham **gum**)
0.0 35.00 32.00 0.0
Bioadhesive (pectin)
0.0 3.00 6.00 0.0

DETD . . . (salicylic acid)
15 20 30
Solvent (glycerin) 20 20 15
Solvent (propylene glycol)
15 15 15
Solvent (dipropylene glycol)
10 15 15
Bioadhesive (karaya **gum**)
40 30 25

DETD . . . acid)
10 10 10 10 10
Solvent (glycerin)
30 30 20 20 30
Solvent (isocetyl alcohol)
-- -- 10 10 --
Bioadhesive (karaya **gum**)
30 30 20 20 30
Bioadhesive (xantham **gum**)
-- -- 10 10 --
Binder (lecithin)
18 15 10 10 --

DETD **Nicotinic Acid** Derivatives Aluminum Nicotinate, Acipimox, Niceritrol, Nicoclonate, Nicomol, Oxiniacic Acid

CLM What is claimed is:

9. The composition of claim 8, wherein the **gum** is selected from the group consisting of karaya **gum**, tragacanth **gum**, pectin **gum**, xanthan **gum**, guar **gum**, cellulose, and cellulose derivatives.

14. The composition of claim 1 comprising about 20 to 34 weight percent of karaya **gum**, about 20 to 53 weight percent of at least one glycol, and about 10 to 25 weight percent of lidocaine. . .

15. The composition of claim 14 comprising about 30 weight percent of karaya **gum**, about 6 weight percent propylene glycol, about 15 weight percent of dipropylene glycol, about 15 weight percent of glycerine, about. . .

16. The composition of claim 14, comprising about 33 weight percent of karaya **gum**, about 7 weight percent of propylene glycol, about 12 weight percent of dipropylene glycol, weight percent of glycerin, about 10. . .

L6 ANSWER 7 OF 9 USPATFULL

PI US 5344655 19940906 <--

SUMM . . . such as ointment agents (ointment, hydrogel, jelly or cream), plastering agents (molded poultice, tape agent or plaster agent), sticky (or **adhesive**) bandages (sticky bandage, strap, wound strap, surgical tape, taping material, supporter), and to preparations for external application containing same.

SUMM To solve these problems, hydrogel bases containing water-soluble polymers such as polyacrylic acid, starch, **gum** tragacanth, alginic acid, and cellulose derivatives formulated therein are employed. Particularly, hydrous gel bases containing water and polyacrylic acid, alcohols,. . .

SUMM . . . effect due to a backing material, and can formulate a

pharmacologically active ingredient at a high concentration within a thin **adhesive** layer about 10 .mu.m thick, and therefore, has an excellent absorbability of a pharmacologically active ingredient and is used for. . .

SUMM 2) the method of preventing a steaming eruption of skin by making the **adhesive** layer porous and adding a water-soluble polymeric substance such as a cellulose derivative, to thereby enhance the water vapor permeability of the **adhesive** layer (e.g., Japanese Unexamined Patent Publications (Kokai) Nos. 49-97058, 59-232553);

SUMM 3) the method of using an **adhesive** having an enhanced hydrophilic property, such as acrylic copolymers having ether groups, (methacrylamide copolymers, mixtures of styrene-isoprene block copolymers and. . .

SUMM 4) the method of lowering the adhering force by using as the **adhesive** a polymer composed of fine particles (e.g., Japanese Unexamined Patent Publication (Kokai) No. 61-234865);

SUMM 6) the method of extracting low molecular weight components in the **adhesive** layer with an alcohol (e.g., Japanese Unexamined Patent Publication (Kokai) No. 52-75062);

SUMM . . . acid is formulated in an amount which enables it to function as a hydrous base, a marked lowering in the **adhesive** force occurs, and thus the adhesion during plastering is often poor. In addition, since a water-soluble polymer is formulated into a non-water-soluble **adhesive** inherently having no compatibility, a phase separation occurs during the coating of the **adhesive** layer, and thus problems arise such that the moldability and working efficiency are worsened.

SUMM Also, ethanol and isopropanol have sterilizing and disinfecting actions, and if these can be formulated into the **adhesive**, the prevention of skin irritation by bacterial proliferation as well as the effects of a sterilization and disinfection of wounded. . .

SUMM . . . 5 cps, a liquid sag of the ointment and a worsening of the moldability of the plastering agent and the **adhesive** bandage will occur.

SUMM . . . disease therapeutics such as bufexamac, crotamiton, tolnaftate, clotrimazole, isoconazole; vitamins such as retinol, alfacalcidol, thiaminepyrophosphoric acid, riboflavin tetrabutyrate, pyridoxal phosphate, **nicotinic acid**, pantethine, hydroxocobalamin acetate, ascorbic acid, phosphoric ascorbate, tocopherol acetate, menatetranone, phytonadione; ophthalmic agents such as pilocarpine, physostigmine, atropine, hemostatics such. . .

SUMM . . . can be used without particular limitation, and is exemplified by an ethylene-vinyl acetate copolymer and an acrylic or rubbery pressure-sensitive **adhesive**.

SUMM (2) since the adhesion force is weaker than that of the alkyl acrylate type or the rubber type **adhesive**, a mechanical peel-off of skin keratin can be prevented;

SUMM (3) since the adhesion force is stronger than the poultice of the prior art using sodium polyacrylate as the **adhesive**, the base thickness can be made thinner;

SUMM . . . as liquid coating agents or aerosols, or external preparations other than for skin (preparations for buccal, nasal, ophthalmic, rectal, vagina **mucosal** applications), to utilize the specific features as described above.

DETD . . . described above, it is clear that the base composition for external application according to the present invention has a sufficient **adhesive** force to the skin, and alleviates irritation of the skin, enhances the absorbability of a wide range of water-soluble and. . .

L6 ANSWER 8 OF 9 USPATFULL
PI US 5254338 19931019 <--

SUMM . . . such as ointment agents (ointment, hydrogel, jelly or cream), plastering agents (molded poultice, tape agent or plaster agent), sticky (or **adhesive**) bandages (sticky bandage, strap, wound strap, surgical tape, taping material, supporter), and to preparations for external application containing same.

SUMM To solve these problems, hydrogel bases containing water-soluble polymers such as polyacrylic acid, starch, **gum** tragacanth, alginic acid, and cellulose derivatives formulated therein are employed. Particularly, hydrous gel bases containing water and polyacrylic acid, alcohols,. . .

SUMM . . . effect due to a backing material, and can formulate a pharmacologically active ingredient at a high concentration within a thin **adhesive** layer about 10 .mu.m thick, and therefore, has an excellent absorbability of a pharmacologically active ingredient and is used for. . .

SUMM 2) the method of preventing a steaming eruption of skin by making the **adhesive** layer porous and adding a water-soluble polymeric substance such as a cellulose derivative, to thereby enhance the water vapor permeability of the **adhesive** layer (e.g., Japanese Unexamined Patent Publications (Kokai) Nos. 49-97058, 59-232553);

SUMM 3) the method of using an **adhesive** having an enhanced hydrophilic property, such as acrylic copolymers having ether groups, (methacrylamide copolymers, mixtures of styrene-isoprene block copolymers and. . .

SUMM 4) the method of lowering the adhering force by using as the **adhesive** a polymer composed of fine particles (e.g., Japanese Unexamined Patent Publication (Kokai) No. 61-234865);

SUMM 6) the method of extracting low molecular weight components in the **adhesive** layer with an alcohol (e.g., Japanese Unexamined Patent Publication (Kokai) No. 52-75062);

SUMM . . . acid is formulated in an amount which enables it to function as a hydrous base, a marked lowering in the **adhesive** force occurs, and thus the adhesion during plastering is often poor. In addition, since a water-soluble polymer is formulated into a non-water-soluble **adhesive** inherently having no compatibility, a phase separation occurs during the coating of the **adhesive** layer, and thus problems arise such that the moldability and working efficiency are worsened.

SUMM Also, ethanol and isopropanol have sterilizing and disinfecting actions, and if these can be formulated into the **adhesive**, the prevention of skin irritation by bacterial proliferation as well as the effects of a sterilization and disinfection of wounded. . .

DETD . . . 5 cps, a liquid sag of the ointment and a worsening of the moldability of the plastering agent and the **adhesive** bandage will occur.

DETD . . . disease therapeutics such as bufexamac, crotamiton, tolnaftate, clotrimazole, isoconazole; vitamins such as retinol, alfacalcidol, thiaminepyrophosphoric acid, riboflavin tetrabutyrate, pyridoxal phosphate, **nicotinic acid**, pantethine, hydroxocobalamin acetate, ascorbic acid, phosphoric ascorbate, tocopherol acetate, menatetranone, phytonadione; ophthalmic agents such as pilocarpine, physostigmine, atropine, hemostatics such. . .

DETD . . . can be used without particular limitation, and is exemplified by an ethylene-vinyl acetate copolymer and an acrylic or rubbery pressure-sensitive **adhesive**.

DETD (2) since the adhesion force is weaker than that of the alkyl acrylate type or the rubber type **adhesive**, a mechanical peel-off of skin keratin can be prevented;

DETD (3) since the adhesion force is stronger than the poultice of the prior art using sodium polyacrylate as the **adhesive**, the base thickness can be made thinner;

DETD . . . as liquid coating agents or aerosols, or external preparations

other than for skin (preparations for buccal, nasal, ophthalmic, rectal, vagina **mucosal** applications), to utilize the specific features as described above.

DETD . . . described above, it is clear that the base composition for external application according to the present invention has a sufficient **adhesive** force to the skin, and alleviates irritation of the skin, enhances the absorbability of a wide range of water-soluble and. . .

CLM What is claimed is:
2. An **adhesive** bandage comprising a mixture of 2.5 to 33 parts by weight of a polymer or copolymer of N-vinylacetamide, 67 to. . .

L6 ANSWER 9 OF 9 USPATFULL
PI US 4882359 19891121 <--
SUMM The water soluble vitamins include vitamin B.sub.1, vitamin B.sub.2, vitamin B.sub.6, **nicotinic acid**, nicotin amide, pantothenic acid, biotin, vitamin B.sub.12, vitamin C, lipoic acid and inositol.

SUMM . . . ethanol, purified water, glycol and/or the like. To make a suspension drug, the composition may be incorporated with traganth, acacia **gum**, sodium alginate, gelatin, methylcellulose, CMC and/or the like. To prepare a suppository, the composition may be incorporated with cacao butter,. . .

DETD . . . 2.4

p-Aminobenzoic acid	"	12.3
Ketotifen	"	3.8
Clonidine	"	6.3
Nifedipine	"	6.2
Diazepam	"	3.5
Prostaglandin E.sub.2	"	4.8
8-Bromocyclic AMP	"	50.3
1,25-Dihydroxy VD.sub.3	"	5.4
Nicotinic acid	"	15.3

Note:
##STR50##

DETD . . . invention was added to the composition used as a drug, the absorption or penetration of active component through skin or **mucosal** membrane was extremely enhanced.

DETD . . . their topical toxicity, a primary skin irritation test was made on skins using rabbits as the subjects. More particularly, an **adhesive** plaster for use in batch tests, to which 100 .mu.l of a 3% test solution of each of the compounds. . .

```
=> s myrrh and myrophine and mucosal
           367 MYRRH
            92 MYROPHINE
         11409 MUCOSAL
L7            0 MYRRH AND MYROPHINE AND MUCOSAL

=> s myrrh and mucosal
           367 MYRRH
         11409 MUCOSAL
L8           18 MYRRH AND MUCOSAL

=> d 18 1-18
```

L8 ANSWER 1 OF 18 USPATFULL
AN 2003:126780 USPATFULL
TI Anti-HSV agent for inhibiting replication of HSV-1 and HSV-2 and method of producing a substance having anti-HSV activity
IN Tanaka, Akiko, St. Petersburg, FL, UNITED STATES
Jessip, John, St. Petersburg, FL, UNITED STATES
Sears, Amy, St. Petersburg, FL, UNITED STATES
PI US 2003086992 A1 20030508
AI US 2001-476 A1 20011024 (10)
DT Utility
FS APPLICATION
LN.CNT 531
INCL INCLM: 424/770.000
NCL NCLM: 424/770.000
IC [7]
ICM: A61K035-78
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 18 USPATFULL
AN 2003:99268 USPATFULL
TI Nutritional composition
IN Kirschner, Mitchell I., St. Louis, MO, UNITED STATES
Levinson, R. Saul, Chesterfield, MO, UNITED STATES
Paradissis, George N., St. Louis, MO, UNITED STATES
PA Drugtech Corporation, Wilmington, DE, UNITED STATES, 19801 (U.S. corporation)
PI US 2003068372 A1 20030410
AI US 2002-308051 A1 20021203 (10)
RLI Continuation of Ser. No. US 2001-949710, filed on 12 Sep 2001, PENDING Continuation of Ser. No. US 1999-451849, filed on 1 Dec 1999, GRANTED, Pat. No. US 6352713 Continuation-in-part of Ser. No. US 2002-207968, filed on 31 Jul 2002, PENDING Continuation of Ser. No. US 1999-448744, filed on 24 Nov 1999, GRANTED, Pat. No. US 6488956 Continuation of Ser. No. US 1998-128466, filed on 4 Aug 1998, ABANDONED Continuation-in-part of Ser. No. US 1995-474071, filed on 7 Jun 1995, GRANTED, Pat. No. US 5869084 Continuation-in-part of Ser. No. US 1994-262515, filed on 20 Jun 1994, ABANDONED
DT Utility
FS APPLICATION
LN.CNT 1534
INCL INCLM: 424/465.000
INCLS: 514/184.000; 514/474.000; 514/251.000
NCL NCLM: 424/465.000
NCLS: 514/184.000; 514/474.000; 514/251.000
IC [7]
ICM: A61K031-555
ICS: A61K031-525; A61K031-375; A61K009-20
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 18 USPATFULL
AN 2003:95822 USPATFULL
TI Stable oil-in-glycerin emulsion
IN Friedman, Doron, Karme Yosef, ISRAEL
PA J.P.M.E.D. Ltd., Karme Yosef, ISRAEL (non-U.S. corporation)
PI US 6544530 B1 20030408
WO 2000056346 20000928
AI US 2001-700862 20010122 (9)
WO 2000-IL142 20000309
PRAI IL 1999-129102 19990322
DT Utility
FS GRANTED

LN.CNT 609
INCL INCLM: 424/400.000
INCLS: 424/725.000; 424/405.000; 424/434.000; 514/886.000; 514/937.000
NCL NCLM: 424/400.000
NCLS: 424/405.000; 424/434.000; 424/725.000; 514/886.000; 514/937.000
IC [7]
ICM: A61K009-00
ICS: A01N025-00; A01N065-00
EXF 424/725; 424/400; 424/405; 424/434; 514/886; 514/937
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 18 USPATFULL
AN 2003:3106 USPATFULL
TI Absorbable solid compositions for topical treatment of oral **mucosal** disorders
IN Domb, Avraham J., Erfat, ISRAEL
Wolnerman, Joseph Simcha, Jerusalem, ISRAEL
PA EFRAT BIOPOLYMERS LTD. (non-U.S. corporation)
PI US 2003003140 A1 20030102
AI US 2002-83413 A1 20020227 (10)
PRAI US 2001-271735P 20010228 (60)
DT Utility
FS APPLICATION
LN.CNT 1561
INCL INCLM: 424/449.000
NCL NCLM: 424/449.000
IC [7]
ICM: A61K009-70
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 18 USPATFULL
AN 2003:3073 USPATFULL
TI Topical compositions containing probiotic bacillus bacteria, spores, and extracellular products and uses thereof
IN Farmer, Sean, La Jolla, CA, UNITED STATES
PI US 2003003107 A1 20030102
AI US 2002-184665 A1 20020628 (10)
RLI Division of Ser. No. US 1999-383975, filed on 26 Aug 1999, PENDING
PRAI WO 1998-WO47374 19980410
DT Utility
FS APPLICATION
LN.CNT 2715
INCL INCLM: 424/184.100
INCLS: 530/350.000
NCL NCLM: 424/184.100
NCLS: 530/350.000
IC [7]
ICM: A61K039-00
ICS: A61K039-38; C07K001-00; C07K014-00; C07K017-00

L8 ANSWER 6 OF 18 USPATFULL
AN 2002:297622 USPATFULL
TI Compositions of tocol-soluble therapeutics
IN Constantinides, Panayiotis P., Gurnee, IL, United States
Lambert, Karel J., Woodinville, WA, United States
Tustian, Alexander K., Bothell, WA, United States
Nienstedt, Andrew M., Seattle, WA, United States
PA Sonus Pharmaceuticals, Inc., Seattle, WA, United States (U.S. corporation)
PI US 6479540 B1 20021112
AI US 2000-671753 20000927 (9)
PRAI US 1999-156128P 19990927 (60)

DT Utility
FS GRANTED
LN.CNT 912
INCL INCLM: 514/458.000
INCLS: 514/937.000; 514/938.000; 424/400.000; 549/407.000
NCL NCLM: 514/458.000
NCLS: 424/400.000; 514/937.000; 514/938.000; 549/407.000
IC [7]
ICM: A61K031-355
ICS: C07D307-77
EXF 514/458; 514/937; 514/938; 424/400; 549/407
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 18 USPATFULL
AN 2002:60709 USPATFULL
TI Nutritional composition
IN Kirschner, Mitchell I., St. Louis, MO, UNITED STATES
Levison, R. Saul, Chesterfield, MO, UNITED STATES
Paradissis, George N., St. Louis, MO, UNITED STATES
PA DRUGTECH CORPORATION
PI US 2002034543 A1 20020321
AI US 2001-949710 A1 20010912 (9)
RLI Continuation of Ser. No. US 1999-451849, filed on 1 Dec 1999, PENDING
DT Utility
FS APPLICATION
LN.CNT 1540
INCL INCLM: 424/465.000
INCLS: 514/251.000; 514/474.000; 514/184.000
NCL NCLM: 424/465.000
NCLS: 514/251.000; 514/474.000; 514/184.000
IC [7]
ICM: A61K009-20
ICS: A61K031-555; A61K031-525; A61K031-375
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 18 USPATFULL
AN 2002:45363 USPATFULL
TI Nutritional composition
IN Kirschner, Mitchell I., St. Louis, MO, United States
Levinson, R. Saul, Chesterfield, MO, United States
Paradissis, George N., St. Louis, MO, United States
PA Drugtech Corporation, Wilmington, DE, United States (U.S. corporation)
PI US 6352713 B1 20020305
AI US 1999-451849 19991201 (9)
DT Utility
FS GRANTED
LN.CNT 1297
INCL INCLM: 424/441.000
INCLS: 424/439.000; 424/440.000; 426/003.000; 426/073.000; 426/321.000
NCL NCLM: 424/441.000
NCLS: 424/439.000; 424/440.000; 426/003.000; 426/073.000; 426/321.000
IC [7]
ICM: A61K009-28
ICS: A61K009-68; A61K047-00; A23G003-30
EXF 424/441; 424/439; 424/440; 426/73; 426/3; 426/321
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 9 OF 18 USPATFULL
AN 2001:208490 USPATFULL
TI Gum pad for delivery of medication to **mucosal** tissues
IN Yates, Alayne, 4176 Round Top Dr., Honolulu, HI, United States 96822
PI US 6319510 B1 20011120

AI US 2000-510470 20000222 (9)
PRAI US 1999-130341P 19990420 (60)
DT Utility
FS GRANTED
LN.CNT 1502
INCL INCLM: 424/404.000
INCLS: 424/402.000; 424/443.000; 424/449.000; 424/448.000; 424/426.000
NCL NCLM: 424/404.000
NCLS: 424/402.000; 424/426.000; 424/443.000; 424/448.000; 424/449.000
IC [7]
ICM: A01N025-34
ICS: A61F013-00; A61F002-00
EXF 424/404; 424/402
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 10 OF 18 USPATFULL
AN 2001:32803 USPATFULL
TI Anti-fungal compositions with prolonged activity
IN Friedman, Doron, Karme-Yosef, Israel
Levin, Orna, Kfar-Neter, Israel
Forman, Yochanan, Kibbutz Maabarot, Israel
Friedman, Michael, Jerusalem, Israel
PA Farmo-Nat Ltd., Ashkelon, Israel (non-U.S. corporation)
PI US 6197305 B1 20010306
AI US 1998-2925 19980105 (9)
DT Utility
FS Granted
LN.CNT 787
INCL INCLM: 424/195.100
INCLS: 424/404.000; 424/405.000; 424/435.000; 424/539.000
NCL NCLM: 424/737.000
NCLS: 424/404.000; 424/405.000; 424/435.000; 424/539.000; 424/730.000;
424/738.000; 424/739.000; 424/745.000; 424/769.000
IC [7]
ICM: A61K035-78
ICS: A61K035-64; A01N025-00
EXF 424/195.1; 424/404; 424/405; 424/435; 424/539

L8 ANSWER 11 OF 18 USPATFULL
AN 2000:125011 USPATFULL
TI Use of essential oils to increase bioavailability of orally administered pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 6121234 20000919
AI US 1998-19936 19980206 (9)
RLI Continuation of Ser. No. US 1995-478207, filed on 7 Jun 1995, now patented, Pat. No. US 5716928
DT Utility
FS Granted
LN.CNT 1608
INCL INCLM: 514/011.000
INCLS: 424/409.000; 424/452.000; 424/455.000; 424/465.000; 514/946.000
NCL NCLM: 514/011.000
NCLS: 424/409.000; 424/452.000; 424/455.000; 424/465.000; 514/946.000
IC [7]
ICM: A61K031-12
EXF 514/11; 514/946; 424/452; 424/455; 424/409; 424/405
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 12 OF 18 USPATFULL
AN 2000:21211 USPATFULL
TI Synergistic herbal extracts
IN Levin, Orna, Kfar-Neter, Israel
Friedman, Doron, Karme-Yosef, Israel
Forman, Yochanan, Kibbutz Maabarot, Israel
Friedman, Michael, Jerusalem, Israel
PA Farmo-Nat Ltd., Ashkelon, Israel (non-U.S. corporation)
PI US 6027716 20000222
AI US 1997-825798 19970402 (8)
DT Utility
FS Granted
LN.CNT 887
INCL INCLM: 424/058.000
INCLS: 424/195.100
NCL NCLM: 424/058.000
NCLS: 424/730.000; 424/737.000; 424/738.000; 424/739.000
IC [7]
ICM: A61K007-26
ICS: A61K035-78
EXF 424/49; 424/58; 424/195.1

L8 ANSWER 13 OF 18 USPATFULL
AN 1999:72261 USPATFULL
TI Use of benzoin gum to inhibit P-glycoprotein-mediated resistance of pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 5916566 19990629
WO 9640192 19961219
AI US 1998-973593 19980211 (8)
WO 1996-US9607 19960607
19980211 PCT 371 date
19980211 PCT 102(e) date
DT Utility
FS Granted
LN.CNT 1549
INCL INCLM: 424/195.100
INCLS: 514/449.000
NCL NCLM: 424/195.180
NCLS: 514/449.000
IC [6]
ICM: A61K035-78
ICS: A61K031-335
EXF 424/195.1; 514/2; 514/449
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 14 OF 18 USPATFULL
AN 1998:14776 USPATFULL
TI Use of essential oils to increase bioavailability of oral pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 5716928 19980210
AI US 1995-478207 19950607 (8)
DT Utility
FS Granted
LN.CNT 1709

INCL INCLM: 514/011.000
INCLS: 424/452.000; 424/455.000; 424/409.000; 424/465.000; 514/946.000
NCL NCLM: 514/011.000
NCLS: 424/409.000; 424/452.000; 424/455.000; 424/465.000; 514/946.000
IC [6]
ICM: A61K031-12
EXF 514/11; 514/946; 424/452; 424/455; 424/409; 424/465
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 15 OF 18 USPATFULL
AN 97:80939 USPATFULL
TI Use of essential oils to increase bioavailability of oral pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 5665386 19970909
AI US 1995-486186 19950607 (8)
DT Utility
FS Granted
LN.CNT 1631
INCL INCLM: 424/451.000
INCLS: 424/455.000; 424/456.000; 514/946.000
NCL NCLM: 424/451.000
NCLS: 424/455.000; 424/456.000; 514/946.000
IC [6]
ICM: A61K009-48
EXF 424/456; 424/465; 424/449; 424/451; 424/455; 514/946
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 16 OF 18 USPATFULL
AN 95:100989 USPATFULL
TI Polyphase fluid-extraction process, resulting products and methods of use
IN Huffstutler, Jr., Miles C., 1608 W. 155th St., Burnsville, MN, United States 55306
Steuart, Gary M., P.O. Box 356, Harmony, MN, United States 55939
PI US 5466455 19951114
AI US 1993-120988 19930915 (8)
RLI Continuation-in-part of Ser. No. US 1992-980839, filed on 24 Nov 1992, now patented, Pat. No. US 5330756 which is a continuation-in-part of Ser. No. US 1990-599616, filed on 18 Oct 1990, now abandoned
DT Utility
FS Granted
LN.CNT 1181
INCL INCLM: 424/401.000
INCLS: 424/045.000; 424/047.000; 424/195.100; 424/450.000; 424/DIG.015
NCL NCLM: 424/401.000
NCLS: 424/045.000; 424/047.000; 424/450.000; 424/728.000; 424/729.000; 424/746.000; 424/770.000; 424/773.000; 424/DIG.015
IC [6]
ICM: A61K035-78
ICS: A01N025-02
EXF 424/401; 424/405; 424/450; 424/43; 424/44; 424/45; 424/46; 424/47; 424/195.1; 424/433; 424/443; 424/DIG.15; 514/965; 514/937; 264/4; 436/829

L8 ANSWER 17 OF 18 USPATFULL
AN 94:62220 USPATFULL
TI Polyphase fluid extraction process, resulting products and methods of use

IN Steuart, Gary M., 98 Viking Terr., Northfield, MN, United States 55057
Huffstutler, Jr., M. Conrad, 6200 Lynn La., Lago Vista, TX, United States 78645
PI US 5330756 19940719
AI US 1992-980839 19921124 (7)
RLI Continuation-in-part of Ser. No. US 1990-599616, filed on 18 Oct 1990, now abandoned
DT Utility
FS Granted
LN.CNT 847
INCL INCLM: 424/405.000
INCLS: 424/043.000; 424/044.000; 424/045.000; 424/450.000; 424/047.000; 424/195.100; 424/401.000; 424/DIG.015; 514/937.000; 514/965.000; 436/829.000
NCL NCLM: 424/405.000
NCLS: 424/043.000; 424/044.000; 424/045.000; 424/047.000; 424/401.000; 424/450.000; 424/725.000; 424/DIG.015; 436/829.000; 514/937.000; 514/965.000
IC [5]
ICM: A01N025-02
ICS: A01N065-00; A61K035-78; A61K037-22
EXF 424/401; 424/405; 424/450; 424/43; 424/44; 424/45; 424/46; 424/47; 424/195.1; 424/443; 424/433; 424/DIG.15; 424/937; 514/965; 264/4; 436/829

L8 ANSWER 18 OF 18 USPATFULL
AN 94:11231 USPATFULL
TI Encapsulated flavor with bioadhesive character in pressed mints and confections
IN Cherukuri, Subraman R., 10 Jean Dr., Towaco, NJ, United States 07082
Raman, Krishna P., 5 Marre Dr., Randolph, NJ, United States 07869
Mansukhani, Gul, 97 Petrus Ave., Staten Island, NY, United States 10312
Orama, Angel M., 19 Elizabeth Ave., Stanhope, NJ, United States 07874
PI US 5284659 19940208
AI US 1990-502464 19900330 (7)
DT Utility
FS Granted
LN.CNT 799
INCL INCLM: 424/441.000
INCLS: 424/435.000; 424/439.000; 424/465.000; 424/468.000; 424/471.000; 424/472.000; 424/473.000; 424/484.000; 424/485.000; 424/486.000; 424/488.000; 424/487.000
NCL NCLM: 424/441.000
NCLS: 424/435.000; 424/439.000; 424/465.000; 424/468.000; 424/471.000; 424/472.000; 424/473.000; 424/484.000; 424/485.000; 424/486.000; 424/487.000; 424/488.000
IC [5]
ICM: A61K009-20
ICS: A61K009-28
EXF 424/441; 424/499; 424/435; 424/439; 424/472; 424/471; 424/473

=> d 18 1-18 kwic

L8 ANSWER 1 OF 18 USPATFULL
SUMM [0003] Once the virus is transmitted to a susceptible individual, HSV replicates in the epithelial cells of **mucosal** surfaces. The HSV replication is usually asymptomatic, as evidenced by the many individuals who are seropositive for HSV antibody, but. . .
SUMM . . . taken in considerable excess. There are several herbs that are more than a match for most viruses, examples being; lavender, **myrrh** and sage.

L8 ANSWER 2 OF 18 USPATFULL
SUMM . . . U.S. Pat. No. 5,288,497, disclose a composition and method of making a medicament composition that can be absorbed through the **mucosal** tissues of the mouth, pharynx and esophagus. The medicament can be lipophilic or non-lipophilic. Citric acid is included in the. . .
SUMM . . . iceland moss, irish moss, jojoba, juniper, kelp, lady's slipper, lemon grass, licorice, lobelia, mandrake, marigold, marjoram, marshmallow, mistletoe, mullein, mustard, **myrrh**, nettle, oatstraw, oregon grape, papaya, parsley, passion flower, peach, pennyroyal, peppermint, periwinkle, plantain, pleurisy root, pokeweed, prickly ash, psyllium, quassia,. . .

L8 ANSWER 3 OF 18 USPATFULL
SUMM . . . Hypericum (Hypericaceae perforatus), Echinacea (also known as Coneflower) (Echinaceae species such as Echinaceae angustifoliae radix and Echinaceae purpurea), Baptisia, Calendula, **Myrrh**, Phytolaca, Salvia, Catechu black, Krameria, Tsuga, Rosmarinus, Styrax, Crataegus, Glycerrhiza (Glycerrhiza glabra), Angelica, Krameria, Matricaria, Mallow and Sage. Chamomile, Hammamelis,. . .
SUMM . . . derivatives or natural gums, such as Xanthan gum or colloidal fumed silica. Semi-solid oil-in-glycerin emulsions are suitable for topical and **mucosal** application, for effective local delivery of water insoluble bioactives. Oil-in-glycerin emulsions are advantageous for oral administration to achieve enhanced oral. . .
DETD **Mucosal** Application, Concentrated Vaginal Hygiene
DETD **Mucosal** Application, Anti-hemorrhoid
CLM What is claimed is:
. . . at least one biodegradable emulsifier and at least one bioactive essential oil component for topical, external use on skin and **mucosal** surfaces wherein the bioactivity of said essential oil is selected from the group consisting of topical anti-inflammatory activity, topical anti-fungal. . .
. . . a vegetable carbohydrate or polycarbohydrate and at least one bioactive essential oil component for topical, external use on skin and **mucosal** surfaces wherein the bioactivity of said essential oil is selected from the group consisting of topical anti-inflammatory activity, topical anti-fungal. . .

L8 ANSWER 4 OF 18 USPATFULL
TI Absorbable solid compositions for topical treatment of oral **mucosal** disorders
AB The invention provides a solid, self-bioadhesive composition for topical application that adheres to the oral **mucosal** tissue comprising a therapeutically effective amount of at least one herbal or homeopathic active agent; and a pharmaceutically acceptable solid. . .
SUMM . . . oral care compositions in the form of a topical self-adhesive sticker that adheres to the oral tissue surface for treating **mucosal** disorders such as lesions, aphthous stomatitis, inflamation, microbial infection and toothache. The sticker is comprising at least a minimally effective. . . carrier powder and compressed into tablet stickers. Of particular interest, this invention further relates to a method for treating oral **mucosal** lesions in humans by applying a topical adhesive sticker releasing a safe and effective amount of monoterpenes with three unsaturations. . .
SUMM [0002] Gingivitis, **mucosal** lesions, and periodontal disease, are all undesirable conditions that affect many people. It is generally believed that the primary cause. . .
SUMM [0010] The aphthous ulcer can begin as a single or a multiple superficial erosion of the oral **mucosal** epithelium covered by a gray membrane. The most common sites of occurrence are the mucosa of

the lips and cheeks,. . .

SUMM . . . delivery systems have been suggested in prior art, the use of herbal and homeopatic medications for the treatment of oral **mucosal** lesions were not suggested. Dueto the safety risk of systemic uptake of drugs delivered by buccal delivery, the use of. . . treating oral ulcers with high complience. The herbs mentioned in this invention are surprisingly effective in trating the various oral **mucosal** disorders.

SUMM . . . a convenient herbal medication and treatment in the form of a long acting self-bioadhesive sticker to be placed onto oral **mucosal** lesions such as herpes labialis and aphthous stomatitis lesions, fever blisters, cold sores and canker sores, and the like.

SUMM [0027] It is another object of the invention to provide a medication for treatment of oral **mucosal** disorders in which the active agent is at least one bioactive safe herbal medicine adapted to be provided directly on. . .

SUMM [0028] It is another object of the invention to provide a medication for treatment of oral **mucosal** disorders in which the active agent contain a homeopathic medication.

SUMM [0029] It is another object of the invention to provide a composition for treatment of oral **mucosal** disorders and aphthous stomatitis lesions which can stop progression of the lesion in any phase of its development.

SUMM [0036] It is another object of the invention to provide a bioadhesive solid disc comprising the bioadhesive composition, limonene as **mucosal** enhancer, a mixture of herbal extract and a synthetic or natural bioactive anesthetic, antiviral, antimicrobial, anti-inflammatory, anti-proliferative or antifungal agent.

SUMM . . . to the present invention, there is now provided a solid, self-bioadhesive composition for topical application that adheres to the oral **mucosal** tissue comprising:

SUMM . . . of the present invention, there is provided a solid self-bioadhesive composition for a topical applicatin that adheres to the oral **mucosal** tissue comprising a combination of an anti-inflammatory agent and an anti-microbial agent; and a pharmaceutically acceptable solid bioadhesive carrier in. . .

SUMM . . . also provides a method for the preparation of a solid, self-bioadhesive composition for topical application that adheres to the oral **mucosal** tissue comprising the following steps:

SUMM [0053] The term "bioadhesive" as used herein means an adhesive which attaches and preferably strongly attaches to **mucosal** tissue upon hydration. Indeed, to qualify as a bioadhesive, a substance must be capable of maintaining adhesion in moist or. . .

SUMM . . . root extract, Gardenia fruit extract, Pulsatilla root extract, Pueraria root extract, Radix gentianae Longdancao antifungal agent to treat cutaneous and **mucosal** syndromes caused by candida infection or plant extract selected from the combination of two or more of those and other. . .

SUMM . . . care conditions. Therefore, prior art compositions, mentioned above, have not been entirely satisfactory for the treatment and/or prevention of oral **mucosal** lesions. Therefore, additional efficacious compositions and methods of treatment for these purposes are desirable.

SUMM . . . the oral cavity of the present invention, a safe and effective amount of herbal composition is preferably applied to the gingival/ **mucosal** tissue in a form on a bioadhesive sticker preferably for at least 30 min., preferably from about 1 hour to. . .

DETD . . . AV-19-c 20 tablets
934 + Elder, 1:5, 15% (7.5 ml) and 1 g magnesium
10 mm
1 g of HPC **Myrrh**, 1:4, 20% (8 ml) stearate
(10 mg, layer I) + 7.5 ton

(AV-19-c) Hypericum 1:10, 20% (20 ml) a mixture. . .

DETD . . . is that each layer may contain different active agents that are exposed at a different time and rate to the **mucosal** surface for better treatment.

DETD . . . used by patients exhibiting herpetic stomatitis lesions (fever blisters or cold sores) and three patients with aphthous ulcers (canker sores), **mucosal** inflammation, toothache, RAS, and lesions on the lips, tang, and gingiva. Treatment consisting of topical application of the medication once. . .

DETD . . . dry a mixture of paint extrant at the amonut equivalent to the dry plant: Chamomil 2 g, Salvia 2 g, **Myrrh** 1 g, Hypericum 1 g, and Mentha 0.4 g. To the mixture, Commiphoria powder 10%, 20 mg, and Mannitol 1. . .

DETD . . . HPMC to form tablets by compression. Tablets without Limonene oil or without Carnallite were prepared and tested on patients with **mucosal** inflammation and gingivitis. All tablets were very active with the most active is the tablets containing the Limonene and Carnallite.. . .

DETD . . . i.e. karaya gum) and lyophilization. The dry powder is then compressed into a tablet which is placed onto a oral **mucosal** lesion.

CLM What is claimed is:

1. A solid, self-bioadhesive composition for topical application that adheres to the oral **mucosal** tissue comprising: (a) a therapeutically effective amount of at least one herbal or homeopathic active agent; and (b) a pharmaceutically. . .

. . . in the form of a disc of 2-15 mm diameter and 0.4 to 2.3 mm thick that adheres to oral **mucosal** tissue for at least 30 minutes

27. A solid self-bioadhesive composition for a topical applicatin that adheres to the oral **mucosal** tissue comprising: i. a combination of an anti-inflammatory, anesthetics agent and an anti-microbial agent; and ii. a pharmaceutically acceptable solid. . .

29. A method for the preparation of a solid, self-bioadhesive composition for topical application that adheres to the oral **mucosal** tissue comprising the following steps: iii) forming a solid powder of a herbal active agent by drying the herbal liquid. . .

. . . is compressed into a disc form of 2-15 mm diameter and 0.4 to 2.3 mm thick that adheres to oral **mucosal** tissue for at least 30 minutes or more.

L8 ANSWER 5 OF 18 USPATFULL

AB . . . a supernatant or filtrate of a culture of said Bacillus coagulans strain, suitable for topical application to the skin or **mucosal** membranes of a mammal, which are utilized to inhibit the growth of bacterium, yeast, fungi, virus, and combinations thereof. The. . .

SUMM . . . N-nitrosamines), which may serve an important role if the process is subsequently found to occur at the level of the **mucosal** surface. See e.g., Rowland, I. R. and Grasso, P., Appl. Microbiol. 29: 7-12. Additionally, the co-administration of lactulose and Bifidobacteria. . .

SUMM [0014] It has also been demonstrated that the microbiota of the gastrointestinal tract affects both **mucosal** and systemic immunity within the host. See e.g., Famularo, G. et al., Stimulation of Immunity by Probiotics. In: Probiotics: Therapeutic. . .

SUMM . . . an extracellular product of a Bacillus coagulans species in a pharmaceutically-acceptable carrier suitable for topical application to skin or a **mucosal** membrane of a mammal is disclosed. In this preferred embodiment, the extracellular product comprises the

supernatant or filtrate of a. . .

SUMM . . . the extracellular product of the Pseudomonas lindbergii strain in a pharmaceutically-acceptable carrier suitable for topical application to skin or a **mucosal** membrane of a mammal is disclosed. The carrier may be an emulsion, cream, lotion, gel, oil, ointment, suspension, aerosol spray,. . .

DETD . . . the present invention. The term "topical" is broadly utilized herein to include both epidermal and/or skin surfaces, as well as **mucosal** surfaces of the body.

DETD . . . animals, as are all well known. Preferred fragrances useful in a composition of this invention include African violet, frankincense & **myrrh**, lavender, vanilla, gardenia, honeysuckle, sandalwood, musk, jasmine, lotus, orange blossom, patchouli, heather, magnolia, amber, rose, and the like fragrances. Preferred. . . amber, apple, apricot, bayberry, benzion, cactus blossom, carnation, carrageenan, cedarwood, cinnamon, cloves, coconut, cedar, copal, Emu, eucalyptus, franfipani, frankincense and **myrrh**, gardenia, grapefruit, heather, herbs, honeysuckle, jasmine, jojoba, kelp, lavender, lemon, lilac, lotus, magnolia, mulberry, musk, **myrrh**, narcissus, orange blossom, patchoull, peach, pinon pine, plumeria, rose, rosemary, safflower, sage, sandalwood, spirulina, strawberry, vanilla, violet, wisteria, and the. . .

DETD . . . the present invention, the active agents are combined with a "carrier" which is physiologically compatible with the skin, membrane, or **mucosal** tissue of a human or animal to which it is topically administered. Specifically, in the preferred embodiment, the carrier is. . .

DETD [0110] The present invention discloses methodologies for treating, reducing, and/or controlling microbial infections in a variety of skin and **mucosal** membrane tissues using a therapeutic composition or therapeutic article of manufacture of this invention. Optimally the compositions effectively reduce the. . .

DETD [0207] In another preferred embodiment, solid vaginal suppositories or inserts containing approximately 1.times.10.sup.8 Bacillus coagulans per inert are utilized for **mucosal** treatment of Candida abbicans and/or Candida tropicalis infections. Such formulations can be made, for example, from a combination of corn. . .

DETD . . . the therapeutic bathing compositions of the present invention allow the establishment of the probiotic Bacillus coagulans on the skin or **mucosal** membranes, which tends to mitigate dermatitis of unknown etiology.

L8 ANSWER 6 OF 18 USPATFULL

SUMM . . . or lipid-drug conjugates have been disclosed as a means of rendering water-soluble drugs more lipophilic, more readily absorbable through various **mucosal** membranes, such as the intestinal, corneal and dermal, and for targeting of drugs (NexStar U.S. Pat. Nos. 6,024,977; 5, 827,819;. . .

DRWD . . . fir, frankincense, garlic, geranium, rose, ginger, lime, grapefruit, orange, hyssop, jasmine, jojoba, juniper, lavender, lemon, lemongrass, marjoram, mugwort, watercress, mullen, **myrrh**, bigarde neroli, nutmeg, bitter orange, oregano, patchouly, pennyroyal, primrose, retinols, papaya, pepper, peppermint, poppyseed, petitegrain, pine, poke root, rosehip, rosemary,. . .

L8 ANSWER 7 OF 18 USPATFULL

SUMM . . . U.S. Pat. No. 5,288,497, disclose a composition and method of making a medicament composition that can be absorbed through the **mucosal** tissues of the mouth, pharynx and esophagus. The medicament can be lipophilic or non-lipophilic. Citric acid is included in the. . .

SUMM . . . iceland moss, irish moss, jojoba, juniper, kelp, lady's

slipper, lemon grass, licorice, lobelia, mandrake, marigold, marjoram, marshmallow, mistletoe, mullein, mustard, **myrrh**, nettle, oatstraw, oregon grape, papaya, parsley, passion flower, peach, pennyroyal, peppermint, periwinkle, plantain, pleurisy root, pokeweed, prickly ash, psyllium, quassia,. . .

L8 ANSWER 8 OF 18 USPATFULL

SUMM . . . U.S. Pat. No. 5,288,497, disclose a composition and method of making a medicament composition that can be absorbed through the **mucosal** tissues of the mouth, pharynx and esophagus. The medicament can be lipophilic or non-lipophilic. Citric acid is included in the. . .

SUMM . . . iceland moss, irish moss, jojoba, juniper, kelp, lady's slipper, lemon grass, licorice, lobelia, mandrake, marigold, marjoram, marshmallow, mistletoe, mullein, mustard, **myrrh**, nettle, oatstraw, oregon grape, papaya, parsley, passion flower, peach, pennyroyal, peppermint, periwinkle, plantain, pleurisy root, pokeweed, prickly ash, psyllium, quassia,. . .

L8 ANSWER 9 OF 18 USPATFULL

TI Gum pad for delivery of medication to **mucosal** tissues

AB . . . mouth; (b) an intermediate, reservoir layer for containing medication therein; and (c) a semi-permeable outer layer facing outwardly toward oral **mucosal** tissues in the mouth which will allow saliva to enter and dissolve the medication in the reservoir layer into solution and pass the diffused saliva-medication solution outwardly to the oral **mucosal** tissues. The backing layer is placed on the gum so that the semi-permeable outer layer faces outwardly toward the buccal. . . the semi-permeable layer and dissolves the medication in the reservoir layer, then diffuses outwardly through the semi-permeable layer to the **mucosal** tissues in the mouth where it is readily absorbed into the circulatory system. The Gum Pad can be used for. . .

SUMM . . . to an improved methods for treatment of systemic diseases and illnesses by delivery of medication into the body through oral **mucosal** tissue. More particularly, it concerns the use of a layered pad (Gum Pad) which is worn intra-orally on the gums for dispensing medication contained in the pad by saliva diffusion and transport to the oral **mucosal** tissues.

SUMM It is known that medication can be absorbed into the body through the soft **mucosal** tissues in the interior layers of the body. The medication can pass through the tissues directly into the systemic circulation,. . . preserves the potency of these medications. The efficacy of transmucosal delivery depends in large part on the extent of the **mucosal** surface exposed to medication and the time over which the medication remains present and available on the **mucosal** surface.

SUMM Oral **mucosal** delivery offers several distinct advantages over other routes. The mouth is easily accessible with a wide aperture and a broad **mucosal** surface. The medication can pass easily into the reticulated veins that lie under the oral mucosa. The oral mucosa has. . .

SUMM Absorption rates across **mucosal** surfaces vary according to the physicochemical properties of the mucosa such as thickness of the epithelial layers, electrical resistance, and. . .

SUMM . . . they adhere to the mucosa, they are less likely to be swallowed than the tablets noted above. However, problems with **mucosal** irritation can occur due to the adhesive and the high concentration of medication exiting onto a limited area of the. . .

SUMM . . . may be applied by a professional or the patient. Limitations include patient discomfort, difficulties in affixing the patch to the **mucosal** surface; difficulty removing the patch if the adhesive

adheres too tightly; and absorption that is limited to the very small. . .

SUMM . . . primary object of the present invention is to provide an oral transmucosal device for delivery of medication to the oral **mucosal** tissues which will overcome the shortcomings of the prior art devices.

SUMM A further object is to provide an oral transmucosal device that does not irritate the oral **mucosal** tissues by delivering highly concentrated medication onto a limited area of mucosa.

SUMM . . . that will deliver dried or freeze-dried pharmaceutical or nutritional agents (referred to as medication) to a broad area of oral **mucosal** tissue.

SUMM . . . mouth; (b) an intermediate, reservoir layer for containing medication therein; and (c) a semi-permeable outer layer facing outwardly toward oral **mucosal** tissues in the mouth which will allow saliva to enter and dissolve the medication in the reservoir layer into solution and pass the diffused saliva-medication solution outwardly to the oral **mucosal** tissues.

DRWD . . . general the use of an oral transmucosal device in the mouth of a person for delivery of medication to oral **mucosal** tissues in accordance with the invention.

DRWD . . . illustrating the device in place of the gums, and the liquefaction of medication from the device and delivery to the **mucosal** tissue for absorption into the human circulatory system.

DETD . . . layer 18. The nonporous backing layer 12 contributes stability, but allows flexibility, so that the pad can adapt to the **mucosal** cavity without buckling or curling.

DETD . . . to be formed from a hydrophilic polymeric resin that would naturally adhere to the gum tissue. Any adhesive can cause **mucosal** irritation, although irritation is less likely with an adhesive such as chitosan. Other problems associated with adhesive use are bad. . .

DETD . . . that they can fracture if bitten or chewed. Due to its extended length and installed position between the gum and **mucosal** tissues, the flexible membrane used in the Gum Pad is not susceptible to being fractured. In addition, the Gum Pad. . .

DETD . . . saliva and is transported outwardly through the apertures or pores of the semi-permeable layer 18 to be absorbed by the **mucosal** tissue, as illustrated in FIG. 8. Upon absorption into the **mucosal** tissue, the medication enters the capillaries 22a and is transported within the circulatory system.

DETD . . . The Gum Pad can deliver significantly more medication than other devices due to the capacity of the reservoir, the large **mucosal** surface to which the medication diffuses, and the length of time the device can be left in place. The pad. . .

DETD . . . jaw, thereby allowing the use of adhesives to be avoided altogether. By placement on the gum facing outwardly toward the **mucosal**, the medication diffused and transported by saliva pressure can disperse over a larger **mucosal** surface area, thereby further increasing medication delivery, while also decreasing the likelihood of irritation since the mucosa is exposed to. . .

DETD . . . of the medication contained in the Gum Pad will vary according to the use of adjuvants and the pharmacodynamics of **mucosal** delivery and may be more or less than the standard oral, intramuscular, or intravenous dose. Speed of delivery can also. . .

DETD . . . also be applied by the Gum Pad, including, but not limited to, folic acid, B-6, K-1, Co-Q, green tea, echinacea, **myrrh** or other medicinal oils, and derivatives of seaweed or kelp. The Gum Pad may be used for topical or systemic. . .

CLM What is claimed is:

. . . gum in the mouth of the person using the gum pad, with said third layer facing outwardly toward oppositely facing **mucosal**

tissues in the mouth.

. . . said pad on a supporting part within the mouth of the person with said semi-permeable third layer facing outwardly toward **mucosal** tissue in the mouth so as to permit saliva within the mouth to Penetrate into said semi-permeable third layer and. . . the medication in said second layer and transport it by diffusion through said semi-permeable third layer for absorption into the **mucosal** tissue, wherein the medication retained in said second layer is selected from the group consisting of: anticonvulsants; anxiolytics; anesthetics; analgesics;. . .

. . . 18. A method of treating human systemic disease or disorder by delivery of medication into the human circulatory system through **mucosal** tissue within the mouth of a person, comprising the steps of: (a) providing a pad having a medication soluble by. . . therein with a semi-permeable outer layer covering the medication retained in the pad, said semi-permeable outer layer facing outwardly toward **mucosal** tissue within the mouth of the person; (b) placing said pad on a supporting part within the mouth of the person with said semi-permeable third layer facing outwardly toward **mucosal** tissue in the mouth so as to permit saliva within the mouth to penetrate into said semi-permeable third layer and. . . and (d) transporting the medication dissolved in the saliva by diffusion through said semi-permeable outer layer for absorption into the **mucosal** tissue within the mouth of the person where it can enter into the human circulatory system.

. . . 25% by weight of a total dispersion the medication is carried in, and the medication can be delivered through the **mucosal** tissue into the human circulatory system within a matter of a few minutes or more, and may be maintained as. . .

L8 ANSWER 10 OF 18 USPATFULL

SUMM . . . oil which shows unexpected prolonged anti-fungal activity and, more particularly, to such a combination which can exert anti-fungal activity on **mucosal** membranes or skin as a topical application, or within the gastrointestinal tract.

SUMM . . . with an increase of the normal human skin pH from about 5.5 to a higher, more alkaline value. Similarly, many **mucosal** membranes such as the vagina have a slightly acidic environment when healthy, which tends to become basic when infected with. . .

SUMM . . . and it would be highly advantageous to have, a herbal preparation with proven prolonged anti-fungal activity, particularly for topical skin, **mucosal**, oral and vaginal hygiene, and with the concomitant ability to inhibit bacterial growth and relieve inflammation, which are frequently apparent. . .

SUMM . . . an appropriate ratio. Preferably, the fungal infection is present in a tissue selected from the group consisting of gastrointestinal tract, **mucosal** tissues and skin. More preferably, the **mucosal** tissue is selected from the group consisting of oral cavity and vagina.

DETD . . . term "administered" includes, but is not limited to, such routes of introducing the composition to the subject as local oral, **mucosal**, topical, intra-nasal and intra-vaginal applications.

DETD . . . activity. Specifically, the present invention can be used to combat fungal infection in a variety of environments, including the skin, **mucosal** organs and the oral cavity. These compositions also have strong anti-bacterial activity, in addition to its anti-fungal activity.

DETD . . . ingredient is an astringent salt, which forms a thin protective film on the oral mucosa, reducing the permeability of the **mucosal** cells. Zinc chloride is an example of such an astringent

salt, which is considered safe for topical application to the. . .

DETD . . . 10.0

Beeswax	5.0
Cetearyl octanoate	5.0
Cetearyl glucoside	5.0
Glycerine	5.0
Burdock Extract	4.0
Coneflower Extract	3.0
Baptisia Extract	2.0
Myrrh Extract	2.0
Propolis Extract	2.0
Polyacrylainide/C13-14 Isoparaffin/lauret-7	1.0
Thyme Oil	1.0
Sweet Marjoram Oil	1.0

DETD . . . Saccharin sodium salt 0.03

Composition F

water	61.83
Silica	20.0
Glycerin	10.0
Carrageenan (Chondrus crispus)	1.6
Sodium lauryl sulfate	1.4
Myrrh (Commiphora myrrha) extr.	1.0
Plantain (Plantago major) extr.	0.6
Hypericum perforatum extr.	0.6
Cinnamon (Cinnamon cassia) oil	0.5

Ethy alcohol. . . 5.0

Burdock (Arctium lappa) extract	4.0
Coneflower (Echinacea purpurea) extract	3.0
Wild Indigo (Baptisia tinctoria) extract	2.0
Propolis extract	2.0
Myrrh (Commiphora myrrha) extract	2.0
Thyme (Thymus vulgaris) oil	1.0
Sweet Marjoram (Origanum marjorana) oil	1.0
Polyacrylamide/C13-14 Isoparaffin/Laureth-7	1.0

Composition J

. . .

L8 ANSWER 11 OF 18 USPATFULL

SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .

SUMM . . . Moench (Origanum marjorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13 (1) 8016-38-4 182.20 Neroli, bigarade Citrus aurantium L. 98 2. . .

SUMM . . . in the art (Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al. (1992).

CLM What is claimed is:

. . . Garlic, Rose Geranium, Ginger, Grapefruit, Hyssop, Jasmine Absolute, Jojoba, Juniper Berry, Lavender, Lemon, Lemongrass, Lime, Sweet Marjoram, Mugwort, Mullein Flower, **Myrrh** Gum, Bigarade Neroli, Nutmeg, Bitter Orange, Sweet Orange, Oregano, Patchouly, Pennyroyal, Black Pepper, Peppermint, Petitegrain, Pine Needle, Poke Root, Rose. .

L8 ANSWER 12 OF 18 USPATFULL
SUMM . . . anti-microbial activity and, more particularly, to such a combination which can exert anti-microbial activity in the oral cavity and on **mucosal** organs.
DETD . . . ingredient is an astringent salt, which forms a thin protective film on the oral mucosa, reducing the permeability of the **mucosal** cells. Zinc chloride is an example of such an astringent salt, which is considered safe for topical application to the. . .
DETD . . . 10.0
Beeswax 5.0
Cetearyl octanoate 5.0
Cetearyl glucoside 5.0
Glycerine 5.0
Burdock Extract 4.0
Coneflower Extract 3.0
Baptisia Extract 2.0
Myrrh Extract 2.0
Propolis Extract 2.0
Polyacrylamide/C13-14 1.0
Isoparaffin/lauret-7
Thyme Oil 1.0
Sweet Marjoram Oil 1.0

L8 ANSWER 13 OF 18 USPATFULL
SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .
SUMM . . . Moench (Origanum marjorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13 (1) 8016-38-4 182.20 Neroli, bigarade Citrus surantium L. 98 2. . .
SUMM . . . in the art Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al. (1992).

L8 ANSWER 14 OF 18 USPATFULL
SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .
SUMM . . . Moench (Origanum mariorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13(1) 8016-38-4 182.20 Neroli, bigarade Citrus aurantium L. 98 2 44. . .
SUMM . . . in the art (Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al.

(1992).

CLM What is claimed is:

. . . Garlic, Rose Geranium, Ginger, Grapefruit, Hyssop, Jasmine Absolute, Jojoba, Juniper Berry, Lavender, Lemon, Lemongrass, Lime, Sweet Marjoram, Mugwort, Mullein Flower, **Myrrh** Gum, Bigarade Neroli, Nutmeg, Bitter Orange, Sweet Orange, Oregano, Patchouly, Pennyroyal, Black Pepper, Peppermint, Petitegrain, Pine Needle, Poke Root, Rose. . . .

. . . Garlic, Rose, Geranium, Ginger, Grapefruit, Hyssop, Jasmine, Absolute, Jojoba, Juniper Berry, Lavender, Lemon, Lemongrass, Lime, Sweet Marjoram, Mugwort, Mullein Flower, **Myrrh** Gum, Bigarade Neroli, Nutmeg, Bitter Orange, Sweet Orange, Oregano, Patchouly, Pennyroyal, Black Pepper Peppermint, Petitegrain, Pine Needle, Poke Root, Rose. . .

L8 ANSWER 15 OF 18 USPATFULL

SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .

SUMM . . . Moench (Origanum marjorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13 (1) 8016-38-4 182.20 Neroli, bigarade Citrus aurantium L. 98 2. . .

SUMM . . . in the art (Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al. (1992).

L8 ANSWER 16 OF 18 USPATFULL

SUMM . . . of CFTE, especially CF Symphytum Extracts, CFSYME, which can be used for dermatological treatment of a number of skin and **mucosal** membrane conditions in humans and animals. These conditions include but are not limited to: skin dryness/allergies/rashes, tissue healing, prevention of. . .

DETD . . . cetyl alcohol 840. grams 5.054%
olive oils 320. grams 1.925%
castor oil 230. grams 1.384%
jojoba oil 230. grams 1.384%
myrrh oil 30. grams 0.180%
peppermint oil 1.25 grams 0.008%
16,621.75 grams

DETD . . . 3.156%
cetyl 208. grams 4.558%
olive oil 54. grams 1.183%
castor oil 34. grams .745%
jojoba oil 34. grams .745%
myrrh oil 10. grams .219%
polyoxyethylene (2) stearyl ether 34. grams .745%
polyoxyethylene 21 stearyl ether 103. grams 2.257%
4,653. grams

DETD . . . cetyl alcohol 374. grams 1.820%

olive oil 214. grams 1.040%
castor oil 168. grams .820%
jojoba oil 100. grams .490%
myrrh oil 40. grams .190%
peppermint oil 1.25 grams .006%

DETD . . . The resulting fluid is packaged into a pressurized propellant spray device to facilitate direct external application to scalp, skin or **mucosal** tissue.

L8 ANSWER 17 OF 18 USPATFULL
SUMM . . . improved therapeutic formulations and compositions of CFSE which can be used for dermatological treatment of a number of skin and **mucosal** membrane conditions in humans and animals. These conditions include but are not limited to: skin dryness/allergies/rashes, tissue healing, prevention of. . .
DETD . . . cetyl alcohol 840. grams 5.054%
olive oils 320. grams 1.925%
castor oil 230. grams 1.384%
jojoba oil 230. grams 1.384%
myrrh oil 30. grams 0.180%
peppermint oil 1.25 grams 0.008%
16,621.75
grams
C. Heat both phases to 73.degree. C. pour A into. . .
DETD . . . 3.156%
cetyl 208. grams 4.558%
olive oil 54. grams 1.183%
castor oil 34. grams .745%
jojoba oil 34. grams .745%
myrrh oil 10. grams .219%
polyoxyethylene (2)
34. grams .745%
stearyl ether
polyoxyethylene 21
103. grams 2.257%
stearyl ether
4,653. grams

C.. . .
DETD . . . cetyl alcohol 374. grams 1.820%
olive oil 214. grams 1.040%
castor oil 168. grams .820%
jojoba oil 100. grams .490%
myrrh oil 40. grams .190%
peppermint oil 1.25 grams .006%
C. Heat both phases to 73.degree. deg. C. Pour A into B. . .
DETD . . . The resulting fluid is packaged into a pressurized propellant spray device to facilitate direct external application to scalp, skin or **mucosal** tissue.

L8 ANSWER 18 OF 18 USPATFULL
SUMM . . . a sustained high intensity release of flavor over a period of time by adhesion of the flavor component to the **mucosal** surfaces of the oral cavity and remaining thereon for extended periods of time.
DETD . . . methyl ionone, menthol, licorice, rose oil, violet leaves, salicylates, cyclamen, jasmine oil, elemi oil, clove oil, cardamon oil, anise oil, **myrrh** resin and mixtures thereof. Suitable breath deodorants include, for example, copper gluconate. Antigingivitis agents include, for example, chlorhexidine, thymol, menthol,. . .
CLM What is claimed is:

. . . methyl ionone, menthol, licorice, rose oil, violet leaves, salicylates, cyclamen, jasmine oil, elemi oil, clove oil, cardamon oil, anise oil, **myrrh** resin and mixtures thereof.

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=> s l8 and pd<1999
       2435544 PD<1999
                  (PD<19990000)
L9            6 L8 AND PD<1999

=> d l9 1-6 bib, ab, kwic

L9   ANSWER 1 OF 6  USPATFULL
AN     1999:72261  USPATFULL
TI     Use of benzoin gum to inhibit P-glycoprotein-mediated resistance of
       pharmaceutical compounds
IN     Benet, Leslie Z., Belvedere, CA, United States
       Wacher, Vincent J., San Francisco, CA, United States
       Benet, Reed M., Belvedere, CA, United States
PA     AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI     US 5916566              19990629
       WO 9640192  19961219                                          <--
AI     US 1998-973593          19980211 (8)
       WO 1996-US9607          19960607
                               19980211  PCT 371 date
                               19980211  PCT 102(e) date
DT     Utility
FS     Granted
EXNAM  Primary Examiner: Henley, III, Raymond
LREP   Cooley Godward LLP
CLMN   Number of Claims: 7
ECL    Exemplary Claim: 1
DRWN   No Drawings
LN.CNT 1549
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     A method for increasing bioavailabilty of an orally administered
       hydrophobic pharmaceutical compound, which comprises orally
       administering the pharmaceutical compound to a mammal in need of
       treatment with the compound concurrently with an essential oil or
       essential oil component in an amount sufficient to provide
       bioavailability of the compound in the presence of the essential oil or
       essential oil component greater than bioavailability of the compound in
       the absence of the essential oil or essential oil component, wherein the
       essential oil or essential oil component has an activity of at least 10%
       inhibition at a concentration 0.01 wt. % or less in an assay that
       measures reduced conversion of cyclosporine to hydroxylated products
       using an assay system containing 250 .mu.g rat liver microsomes, 1 .mu.M
       cyclosporine, and 1 .mu.M reduced nicotinamide adenine dinucleotide
       phosphate (NADPH) in 1 ml of 0.1 M sodium phosphate buffer, pH 7.4.
PI     US 5916566              19990629
       WO 9640192  19961219                                          <--
SUMM   . . . until they are eliminated from the body. The sequence of events
       for an oral composition includes absorption through the various
       mucosal surfaces, distribution via the blood stream to various
       tissues, biotransformation in the liver and other tissues, action at the
       target. . .
SUMM   . . . Moench (Origanum     marjorana L.)    Mugwort  98 1  65 3  30 3
       172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7  172.510
       Myrrh Gum Commiphora spp. 100 0  74 3  15 3 13 (1)     8016-38-4
       182.20 Neroli, bigarade Citrus surantium L. 98 2.  .  .
SUMM   . . . in the art Hsing et al. Gastroenterology 1992; 102:879-85). In
```

these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al. (1992).

L9 ANSWER 2 OF 6 USPATFULL
AN 1998:14776 USPATFULL
TI Use of essential oils to increase bioavailability of oral pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 5716928 19980210 <--
AI US 1995-478207 19950607 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Reamer, James H.
LREP Cooley Godward LLP
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1709
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for increasing bioavailability and reducing inter- and intra-individual variability of an orally administered hydrophobic pharmaceutical compound, which comprises orally administering the pharmaceutical compound to a mammal in need of treatment with the compound concurrently with an essential oil or essential oil component in an amount sufficient to provide bioavailability of the compound in the presence of the essential oil or essential oil component greater than bioavailability of the compound in the absence of the essential oil or essential oil component, wherein the essential oil or essential oil component has an activity of at least 10% inhibition at a concentration of 0.01 wt. % or less in an assay that measures conversion of cyclosporine to hydroxylated products using an assay system containing 250/.mu.g rat liver microsomes, 1.mu.M cyclosporine, and 1 mM reduced nicotinamide adenine dinucleotide phosphate (NADPH) in 1 ml of 0.1M sodium phosphate buffer, pH 7.4.
PI US 5716928 19980210 <--
SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .
SUMM . . . Moench (Origanum mariorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13(1) 8016-38-4 182.20 Neroli, bigarade Citrus aurantium L. 98 2 44. . .
SUMM . . . in the art (Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the **mucosal** solution is monitored, as described in Hsing et al. (1992).
CLM What is claimed is:
. . . Garlic, Rose Geranium, Ginger, Grapefruit, Hyssop, Jasmine Absolute,

Jojoba, Juniper Berry, Lavender, Lemon, Lemongrass, Lime, Sweet Marjoram, Mugwort, Mullein Flower, **Myrrh** Gum, Bigarade Neroli, Nutmeg, Bitter Orange, Sweet Orange, Oregano, Patchouly, Pennyroyal, Black Pepper, Peppermint, Petitegrain, Pine Needle, Poke Root, Rose. . .

. . . Garlic, Rose, Geranium, Ginger, Grapefruit, Hyssop, Jasmine, Absolute, Jojoba, Juniper Berry, Lavender, Lemon, Lemongrass, Lime, Sweet Marjoram, Mugwort, Mullein Flower, **Myrrh** Gum, Bigarade Neroli, Nutmeg, Bitter Orange, Sweet Orange, Oregano, Patchouly, Pennyroyal, Black Pepper Peppermint, Petitegrain, Pine Needle, Poke Root, Rose. . .

L9 ANSWER 3 OF 6 USPATFULL
AN 97:80939 USPATFULL
TI Use of essential oils to increase bioavailability of oral pharmaceutical compounds
IN Benet, Leslie Z., Belvedere, CA, United States
Wacher, Vincent J., San Francisco, CA, United States
Benet, Reed M., Belvedere, CA, United States
PA AvMax, Inc., Berkeley, CA, United States (U.S. corporation)
PI US 5665386 19970909 <--
AI US 1995-486186 19950607 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Spear, James M.
LREP Cooley Godward LLP
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1631
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for increasing bioavailability and reducing inter- and intra-individual variability of an orally administered hydrophobic pharmaceutical compound, which comprises orally administering the pharmaceutical compound to a mammal in need of treatment with the compound concurrently with an essential oil or essential oil component in an amount sufficient to provide bioavailability of the compound in the presence of the essential oil or essential oil component greater than bioavailability of the compound in the absence of the essential oil or essential oil component, wherein the essential oil or essential oil component has an activity of at least 10% inhibition at a concentration of 0.01 wt. % or less in an assay that measures conversion of cyclosporine to hydroxylated products using an assay system containing 250 .mu.g rat liver microsomes, 1 .mu.M cyclosporine, and 1 mM reduced nicotinamide adenine dinucleotide phosphate (NADPH) in 1 ml of 0.1M sodium phosphate buffer, pH 7.4.
PI US 5665386 19970909 <--
SUMM . . . until they are eliminated from the body. The sequence of events for an oral composition includes absorption through the various **mucosal** surfaces, distribution via the blood stream to various tissues, biotransformation in the liver and other tissues, action at the target. . .
SUMM . . . Moench (Origanum marjorana L.) Mugwort 98 1 65 3 30 3 172.510 Mullein Flower Verbascum spp. 47 5 9000-45-7 172.510 **Myrrh** Gum Commiphora spp. 100 0 74 3 15 3 13 (1) 8016-38-4 182.20 Neroli, bigarade Citrus aurantium L. 98 2. . .
SUMM . . . in the art (Hsing et al. Gastroenterology 1992; 102:879-85). In these studies rat small intestines turned "inside out" (i.e. the **mucosal** (or luminal) surface turned outside and the serosal surface inside) are bathed in a drug containing solution with and without. . . Alternatively, the serosal side of rat small intestines is bathed with the drug or essential oil of interest and the

mucosal solution is monitored, as described in Hsing et al. (1992).

L9 ANSWER 4 OF 6 USPATFULL
AN 95:100989 USPATFULL
TI Polyphase fluid-extraction process, resulting products and methods of use
IN Huffstutler, Jr., Miles C., 1608 W. 155th St., Burnsville, MN, United States 55306
Steuart, Gary M., P.O. Box 356, Harmony, MN, United States 55939
PI US 5466455 19951114 <--
AI US 1993-120988 19930915 (8)
DCD 20110719
RLI Continuation-in-part of Ser. No. US 1992-980839, filed on 24 Nov 1992, now patented, Pat. No. US 5330756 which is a continuation-in-part of Ser. No. US 1990-599616, filed on 18 Oct 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Azpuru, Carlos
LREP Huffstutler, M. Conrad
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1181
AB Processes for polyphase fluid extraction of concentrated, active therapeutic components from parts of selected medicinal plants which have been identified chemotaxonomically are described. The resulting products-by-processes are defined as Concentrated Fluid Therapeutic Extracts, CFTE, of the selected plant types, where T represents a specific herbal plant family such as Symphytum, SYM, Taxus, TAX, Panax, PAN or Aloe, ALO. The process disclosed for CFTE preparation includes multiple/sequential stages of diffusional transfer of bioactive constituents from plant tissue into liquid and/or vapor extraction phases under contact conditions of forced convection at controlled temperature and pressure. Therapeutic formulations based on CFTE including emulsions, aerosols, liposomes and controlled-release devices are presented. Treatment methods for a variety of mammalian diseases and conditions and complications of specific diseases are described.
PI US 5466455 19951114 <--
SUMM . . . of CFTE, especially CF Symphytum Extracts, CFSYME, which can be used for dermatological treatment of a number of skin and **mucosal** membrane conditions in humans and animals. These conditions include but are not limited to: skin dryness/allergies/rashes, tissue healing, prevention of. . .
DETD . . . cetyl alcohol 840. grams 5.054%
olive oils 320. grams 1.925%
castor oil 230. grams 1.384%
jojoba oil 230. grams 1.384%
myrrh oil 30. grams 0.180%
peppermint oil 1.25 grams 0.008%
16,621.75 grams

DETD . . . 3.156%
cetyl 208. grams 4.558%
olive oil 54. grams 1.183%
castor oil 34. grams .745%
jojoba oil 34. grams .745%
myrrh oil 10. grams .219%
polyoxyethylene (2) stearyl ether 34. grams .745%
polyoxyethylene 21 103. grams 2.257%

stearyl ether
4,653. grams

DETD . . . cetyl alcohol 374. grams 1.820%
olive oil 214. grams 1.040%
castor oil 168. grams .820%
jojoba oil 100. grams .490%
myrrh oil 40. grams .190%
peppermint oil 1.25 grams .006%

DETD . . . The resulting fluid is packaged into a pressurized propellant spray device to facilitate direct external application to scalp, skin or **mucosal** tissue.

L9 ANSWER 5 OF 6 USPATFULL
AN 94:62220 USPATFULL
TI Polyphase fluid extraction process, resulting products and methods of use
IN Steuart, Gary M., 98 Viking Terr., Northfield, MN, United States 55057
Huffstutler, Jr., M. Conrad, 6200 Lynn La., Lago Vista, TX, United States 78645
PI US 5330756 19940719 <--
AI US 1992-980839 19921124 (7)
RLI Continuation-in-part of Ser. No. US 1990-599616, filed on 18 Oct 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Azpuru, Carlos
LREP Huffstutler, Jr., M. Conrad
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 847
AB Processes for polyphase fluid extraction of concentrated, active therapeutic components from parts of plants identified taxonomically as Symphytum, Taxus and Aloe species are described. The resulting products-by-processes are defined as Concentrated Fluid Plant Extracts (CFPE) of the respective plant types, where P can be S, T or A. The preparation process for CFPE includes multiple/sequential stages of diffusional transfer of the active constituents into liquid and/or vapor extraction phases under contact conditions of forced convection at controlled temperature and pressure. Therapeutic formulations based on CFPE including emulsions, aerosols, liposomes and controlled-release devices are presented. Treatment methods for a variety of skin conditions and complications of specific diseases are indicated.
PI US 5330756 19940719 <--
SUMM . . . improved therapeutic formulations and compositions of CFSE which can be used for dermatological treatment of a number of skin and **mucosal** membrane conditions in humans and animals. These conditions include but are not limited to: skin dryness/allergies/rashes, tissue healing, prevention of. . .
DETD . . . cetyl alcohol 840. grams 5.054%
olive oils 320. grams 1.925%
castor oil 230. grams 1.384%
jojoba oil 230. grams 1.384%
myrrh oil 30. grams 0.180%
peppermint oil 1.25 grams 0.008%
16,621.75
grams
C. Heat both phases to 73.degree. C. pour A into. . .
DETD . . . 3.156%
cetyl 208. grams 4.558%

olive oil 54. grams 1.183%
castor oil 34. grams .745%
jojoba oil 34. grams .745%
myrrh oil 10. grams .219%
polyoxyethylene (2) stearyl ether 34. grams .745%
polyoxyethylene 21 stearyl ether 103. grams 2.257%
4,653. grams

C.. . .
DETD . . . cetyl alcohol 374. grams 1.820%
olive oil 214. grams 1.040%
castor oil 168. grams .820%
jojoba oil 100. grams .490%
myrrh oil 40. grams .190%
peppermint oil 1.25 grams .006%
C. Heat both phases to 73.degree. deg. C. Pour A into B. . .
DETD . . . The resulting fluid is packaged into a pressurized propellant spray device to facilitate direct external application to scalp, skin or **mucosal** tissue.

L9 ANSWER 6 OF 6 USPATFULL
AN 94:11231 USPATFULL
TI Encapsulated flavor with bioadhesive character in pressed mints and confections
IN Cherukuri, Subraman R., 10 Jean Dr., Towaco, NJ, United States 07082
Raman, Krishna P., 5 Marre Dr., Randolph, NJ, United States 07869
Mansukhani, Gul, 97 Petrus Ave., Staten Island, NY, United States 10312
Orama, Angel M., 19 Elizabeth Ave., Stanhope, NJ, United States 07874
PI US 5284659 19940208 <--
AI US 1990-502464 19900330 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Spear, James M.
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 799
AB A confectionery compressed tablet designed to dissolve in the oral cavity and containing a flavor ingredient intimately bound with a bioadhesive is disclosed. The flavor and bioadhesive composition provide a unique mouthfeel so that as the confection dissolves in the oral cavity, a coating of flavor adheres to the moist areas of the oral cavity. There is also provided a confectionery compressed tablet characterized by a single product body with discrete phases contained therein which act to provide timed release of at least one flavor ingredient sequentially. A flavor and bioadhesive mixture can be prepared with a hydrophilic delivery system providing rapid initial delivery of the flavor and unique mouthfeel or as a part of a hydrophobic delivery system providing extended periods of flavor delivery and unique mouthfeel. There is also provided a process for preparing confectionery compressed tablets containing the unique flavor delivery system and mouthfeel.
PI US 5284659 19940208 <--
SUMM . . . a sustained high intensity release of flavor over a period of time by adhesion of the flavor component to the **mucosal** surfaces of the oral cavity and remaining thereon for extended periods of time.
DETD . . . methyl ionone, menthol, licorice, rose oil, violet leaves,

salicylates, cyclamen, jasmine oil, elemi oil, clove oil, cardamon oil, anise oil, **myrrh** resin and mixtures thereof. Suitable breath deodorants include, for example, copper gluconate. Antigingivitis agents include, for example, chlorhexidine, thymol, menthol,. . .

CLM What is claimed is:

. . . methyl ionone, menthol, licorice, rose oil, violet leaves, salicylates, cyclamen, jasmine oil, elemi oil, clove oil, cardamon oil, anise oil, **myrrh** resin and mixtures thereof.

```
=> s podophyllin/cn
L1            1 PODOPHYLLIN/CN

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   9000-55-9  REGISTRY *
* Use of this CAS Registry Number alone as a search term in other STN files may
  result in incomplete search results.  For additional information, enter HELP
  RN* at an online arrow prompt (=>).
CN   Podophyllum (resin)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Resins, podophyllum
OTHER NAMES:
CN   Mayapple, resin
CN   Podophyllin
DEF  Extractives and their physically modified derivatives.  It is a product
     which may contain resin acids and their esters, terpenes, and oxidation or
     polymerization products of these terpenes.  (Podophyllum pelalatum,
     Berberidaceae).
DR   8050-60-0, 8061-07-2, 8063-20-5
MF   Unspecified
CI   MAN, CTS
LC   STN Files:   ADISNEWS, AGRICOLA, AQUIRE, BIOTECHNO, CA, CANCERLIT, CAPLUS,
       CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT,
       IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC, RTECS*, TOXCENTER, USAN
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              12 REFERENCES IN FILE CAPLUS (1957 TO DATE)


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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 10 Jul 2003 (20030710/PD)
FILE LAST UPDATED: 10 Jul 2003 (20030710/ED)
HIGHEST GRANTED PATENT NUMBER: US6591423
HIGHEST APPLICATION PUBLICATION NUMBER: US2003131392
CA INDEXING IS CURRENT THROUGH 10 Jul 2003 (20030710/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 10 Jul 2003 (20030710/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003
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>>>  /PK, etc.                                                        <<<

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>>>  the earliest to the latest publication.                          <<<

This file contains CAS Registry Numbers for easy and accurate
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=> s podophyllin and guar(w)gum
           136 PODOPHYLLIN
         14479 GUAR
         81045 GUM
         11436 GUAR(W)GUM
L2           0 PODOPHYLLIN AND GUAR(W)GUM

=> s mayapple and gusr
            18 MAYAPPLE
             4 GUSR
L3           0 MAYAPPLE AND GUSR

=> s podophyllin and guar
           136 PODOPHYLLIN
         14479 GUAR
L4           2 PODOPHYLLIN AND GUAR

=> d l4 1-2

L4   ANSWER 1 OF 2  USPATFULL
AN     1998:11778  USPATFULL
TI     Skin plate product
IN     Hansen, Henrik Christian, Copenhagen NV, Denmark
       Wanheim, Tarras, Frederiksberg, Denmark
PA     Coloplast A/S, Humlebak, Denmark (non-U.S. corporation)
PI     US 5714225              19980203
AI     US 1996-614944          19960311 (8)
RLI    Continuation of Ser. No. US 1994-182763, filed on 14 Jan 1994, now
       abandoned
PRAI   DK 1993-48          19930115
DT     Utility
FS     Granted
LN.CNT 878
INCL   INCLM: 428/114.000
       INCLS: 428/037.000; 428/064.100; 428/107.000; 428/195.000; 428/343.000;
              428/349.000; 428/351.000; 428/355.000; 424/443.000; 424/447.000;
              424/448.000; 602/048.000; 602/055.000; 604/307.000; 604/336.000;
              604/308.000; 604/304.000
NCL    NCLM:  428/114.000
       NCLS:  424/443.000; 424/447.000; 424/448.000; 428/037.000; 428/064.100;
              428/107.000; 428/195.000; 428/343.000; 428/349.000; 428/351.000;
              602/048.000; 602/055.000; 604/304.000; 604/307.000; 604/308.000;
              604/336.000
IC     [6]
       ICM: A61F013-02
       ICS: A61L015-44; A61L015-58
EXF    428/37; 428/64.1; 428/107; 428/114; 428/195; 428/343; 428/349; 428/351;
       428/355; 424/443; 424/447; 424/448; 602/55; 602/48; 604/307; 604/336;
```

604/308; 604/304

L4 ANSWER 2 OF 2 USPATFULL
AN 91:77603 USPATFULL
TI Skin barrier product with discontinuous adhesive layer
IN Olsen, Hans, Bronshoj, Denmark
Poulsen, Finn, Vaerlose, Denmark
Samuelsen, Peter, Rungsted Kyst, Denmark
PA Coloplast A/S, Espergerde, Denmark (non-U.S. corporation)
PI US 5051259 19910924
WO 8905619 19890629
AI US 1989-382660 19891010 (7)
WO 1988-DK202 19881205
19891010 PCT 371 date
19891010 PCT 102(e) date
PRAI DK 1987-6571 19871215
DT Utility
FS Granted
LN.CNT 785
INCL INCLM: 424/443.000
INCLS: 424/447.000; 424/448.000; 604/307.000; 604/344.000; 604/336.000; 604/338.000; 428/913.000; 428/107.000; 428/195.000; 428/343.000; 428/349.000; 428/351.000; 428/355.000; 428/507.000; 428/479.300; 428/131.000; 428/108.000; 428/037.000; 428/109.000; 428/906.000; 428/110.000; 428/114.000; 428/192.000; 428/196.000; 428/064.000; 428/065.000; 428/066.000; 428/304.400; 428/317.100; 428/317.300; 428/317.500; 428/317.700; 428/457.000; 428/542.800
NCL NCLM: 424/443.000
NCLS: 424/447.000; 424/448.000; 428/037.000; 428/066.400; 428/107.000; 428/108.000; 428/109.000; 428/110.000; 428/114.000; 428/131.000; 428/192.000; 428/195.000; 428/196.000; 428/343.000; 428/349.000; 428/351.000; 428/355.000R; 428/355.000BL; 428/355.000EN; 428/479.300; 428/507.000; 428/906.000; 428/913.000; 604/307.000; 604/336.000; 604/338.000; 604/344.000
IC [5]
ICM: A61F013-02
ICS: A61F005-443; B32B003-10
EXF 428/913; 428/107; 428/195; 428/343; 428/349; 428/351; 428/355; 428/507; 428/479.3; 428/131; 428/108; 428/37; 428/109; 428/906; 428/110; 428/114; 428/192; 428/196; 428/64; 428/65; 428/66; 428/308.4; 428/317.1; 428/317.3; 428/317.5; 428/317.7; 428/457; 428/542.8; 424/443; 424/447; 424/448; 604/307; 604/344; 604/336; 604/338

=> d kwic l4 1-2

L4 ANSWER 1 OF 2 USPATFULL
DETD . . . particular butyl rubber, and hydrocolloid, optionally in the form of a mixture of different hydrocolloid materials, such as gelatin, pectin, **guar** and sodium carboxymethylcellulose. Adhesives of this type may constitute both the more cohesive first material unit and one or more. . .
DETD

	Less cohesive adhesive	Cohesive adhesive
Polyisobutylene (PIB)	40-60	--
Styrene isoprene styrene (SIS)		5-20
Oil		5-30
Resin		10-30

Sodium carboxymethylcellulose (CMC)	25-40	25-40
Guar	10-25	10-25

DETD . . . may be built from a hydrophilic gel material containing an agent effective against warts, e.g. cantharidine, salicylic acid, silver nitrate, **podophyllin** or an anti-metabolic cystostatic, such as cytarabine, fluorouracil or mercapto-purine.

L4 ANSWER 2 OF 2 USPATFULL

SUMM . . . a liquid paraffin as an emulsifier; and in this a discontinuous phase comprising one or more water-swellable hydrocolloids, preferably gum **guar** and/or sodium carboxymethyl cellulose. Known skin barriers may also contain other elastomers, e.g. natural rubber, synthetic resins of a similar. . .

SUMM . . . zones of material may comprise hydrophilic gel substance containing an agent effective against warts, e.g. cantharidine, salicylic acid, silver nitrate, **podophyllin**, or an anti-metabolitic cytostatic such as cytarabine, fluorouracil or mercapto-purine.

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NEWS 18	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 19	May 19	Simultaneous left and right truncation added to WSCA
NEWS 20	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS 21	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS 22	Jun 06	PASCAL enhanced with additional data
NEWS 23	Jun 20	2003 edition of the FSTA Thesaurus is now available
NEWS 24	Jun 25	HSDB has been reloaded

NEWS EXPRESS	April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
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HIGHEST APPLICATION PUBLICATION NUMBER: US2003131392
CA INDEXING IS CURRENT THROUGH 10 Jul 2003 (20030710/UPCA)
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REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2003

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>>>  publication date for all the US publications for an invention     <<<
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>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

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substance identification.

=> s nicotinic acid
         10137 NICOTINIC
        661069 ACID
L1        8140 NICOTINIC ACID
                 (NICOTINIC(W)ACID)

=> s l1 and adhesive
        322789 ADHESIVE
L2         432 L1 AND ADHESIVE

=> s l2 and myrrh
           367 MYRRH
L3           4 L2 AND MYRRH

=> d l3 1-4

L3   ANSWER 1 OF 4  USPATFULL
```

AN 2000:160606 USPATFULL
TI Cleansing and conditioning article for skin or hair
IN McAtee, David Michael, Mason, OH, United States
Nissing, Nicholas James, Cincinnati, OH, United States
Hasenoehrl, Erik John, Loveland, OH, United States
Cabell, David William, Cincinnati, OH, United States
PA The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)
PI US 6153208 20001128
AI US 1998-152034 19980911 (9)
PRAI US 1997-58608P 19970912 (60)
US 1998-72440P 19980126 (60)
US 1998-85495P 19980514 (60)
DT Utility
FS Granted
LN.CNT 3452
INCL INCLM: 424/402.000
INCLS: 424/059.000; 424/070.800; 424/709.000; 424/070.190; 424/070.210; 424/070.220; 424/070.310; 424/401.000; 424/404.000; 424/443.000; 510/130.000; 510/135.000; 510/136.000; 510/137.000
NCL NCLM: 424/402.000
NCLS: 424/059.000; 424/070.190; 424/070.210; 424/070.220; 424/070.310; 424/070.800; 424/401.000; 424/404.000; 424/443.000; 424/709.000; 510/130.000; 510/135.000; 510/136.000; 510/137.000
IC [7]
ICM: A01N025-34
ICS: A61K007-42; A61K007-06; A61K007-075; A61K009-70
EXF 424/401; 424/402; 424/59; 424/404; 424/443; 424/70.8; 424/70.9; 424/70.19; 424/70.21; 424/70.22; 424/70.31; 510/130; 510/135; 510/136; 510/137
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 4 USPATFULL
AN 1999:146000 USPATFULL
TI Delivery of skin benefit agents via **adhesive** strips
IN Crotty, Brian Andrew, Branford, CT, United States
Miner, Philip Edward, Newtown, CT, United States
Johnson, Anthony, Fairfield, CT, United States
Znaiden, Alexander Paul, Trumbull, CT, United States
Corey, Joseph Michael, Waterbury, CT, United States
Vargas, Anthony, Monroe, CT, United States
Meyers, Alan Joel, Trumbull, CT, United States
Lange, Beth Anne, Woodridge, NJ, United States
PA Chesebrough-Pond's USA Co., Greenwich, CT, United States (U.S. corporation)
PI US 5985300 19991116
AI US 1998-204567 19981203 (9)
RLI Division of Ser. No. US 1998-18805, filed on 4 Feb 1998
PRAI US 1997-39378P 19970320 (60)
US 1998-72355P 19980123 (60)
DT Utility
FS Granted
LN.CNT 608
INCL INCLM: 424/402.000
INCLS: 424/401.000; 424/078.030; 424/448.000; 514/847.000; 514/474.000
NCL NCLM: 424/402.000
NCLS: 424/078.030; 424/401.000; 424/448.000; 514/474.000; 514/847.000
IC [6]
ICM: A01N025-34
ICS: A61K009-00
EXF 424/401; 424/402; 424/448; 424/78.03; 514/847; 514/474
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 3 OF 4 USPATFULL
AN 1999:92315 USPATFULL
TI Delivery of skin benefit agents via **adhesive** strips
IN Crotty, Brian Andrew, Branford, CT, United States
    Miner, Philip Edward, Newtown, CT, United States
    Johnson, Anthony, Fairfield, CT, United States
    Znaiden, Alexander Paul, Trumbull, CT, United States
    Corey, Joseph Michael, Waterbury, CT, United States
    Vargas, Anthony, Monroe, CT, United States
    Meyers, Alan Joel, Trumbull, CT, United States
    Lange, Beth Anne, Woodridge, NJ, United States
PA Chesebrough-Pond's USA Co., Greenwich, CT, United States (U.S. corporation)
PI US 5935596 19990810
AI US 1998-18805 19980204 (9)
DT Utility
FS Granted
LN.CNT 606
INCL INCLM: 424/448.000
      INCLS: 424/401.000; 424/443.000; 424/444.000; 424/445.000; 424/446.000; 424/447.000; 424/449.000; 424/484.000; 514/458.000; 514/474.000; 514/844.000; 514/859.000
NCL NCLM: 424/448.000
     NCLS: 424/401.000; 424/443.000; 424/444.000; 424/445.000; 424/446.000; 424/447.000; 424/449.000; 424/484.000; 514/458.000; 514/474.000; 514/844.000; 514/859.000
IC [6]
    ICM: A61K009-70
EXF 424/401; 424/443; 424/444; 424/445; 424/446; 424/447; 424/448; 424/449; 424/484; 514/474; 514/458; 514/844; 514/859
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 4 USPATFULL
AN 95:90171 USPATFULL
TI Flexible, hydrophilic gel film, the process for its production and the use of it
IN Roreger, Michael, Neuwied, Germany, Federal Republic of
    Herrmann, Fritz, Neuwied, Germany, Federal Republic of
    Hoffmann, Hans-Rainer, Neuwied, Germany, Federal Republic of
    List, Harald, Neuwied, Germany, Federal Republic of
PA LTS Lohmann Therapie-Systeme GmbH & Co. KG, Neuwied, Germany, Federal Republic of (non-U.S. corporation)
PI US 5456745 19951010
AI US 1989-392813 19890811 (7)
PRAI DE 1988-3827561 19880813
DT Utility
FS Granted
LN.CNT 1038
INCL INCLM: 106/128.000
NCL NCLM: 106/140.100
     NCLS: 106/140.300
IC [6]
    ICM: C09D101-28
    ICS: C09D189-00
EXF 106/128
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

    (FILE 'HOME' ENTERED AT 11:47:18 ON 14 JUL 2003)

FILE 'USPATFULL' ENTERED AT 11:47:38 ON 14 JUL 2003
L1 8140 S NICOTINIC ACID
L2 432 S L1 AND ADHESIVE
L3 4 S L2 AND MYRRH

=> d l3 1-4 kwic

L3 ANSWER 1 OF 4 USPATFULL
SUMM . . . unbonded regions between the layers. In one embodiment, the first and second layers are bonded together using a hot melt **adhesive**.
DRWD . . . of the first layer shown cut away to show a continuous network of generally parallel sets of intersecting lines of **adhesive** which serve to bond the first layer to the second layer, the bonded region defining generally diamond-shaped unbonded regions.
DRWD . . . facing the viewer, and with a portion of the first layer shown cut away to show a continuous network of **adhesive** which serves to bond the first layer to the second layer, the bonded region defining generally circular-shaped unbonded regions.
DRWD . . . viewer, and with a portion of the apertured layer shown cut away to show generally parallel, spaced apart zones of **adhesive** extending generally parallel to the machine directions of the apertured layer and the nonwoven layer.
DETD . . . or uniform lines, but may, for example, be a network resulting in circular, oval, or other non-polygonal geometric shapes. An **adhesive**, such as a hot melt **adhesive**, designated by reference numeral 300 in FIGS. 1-3, can be used to join the first layer 100 to second layer. . .
DETD . . . layer 100. In FIG. 3, the unbonded regions 114 extend along substantially the full length of the article 20. An **adhesive**, designated by reference numeral 300 in FIGS. 1 and 2 and numerals 300, 310A-310D in FIG. 3, can be used. . .
DETD . . . qualities of the wipe. Without being bound by theory, it is believed that the process of heating causes the thermoplastic **adhesive** to contract, thereby further causing out-of-plane (Z-direction) deformation of the first layer, as well as the second layer. By contracting. . .
DETD For example, a wipe that has been adhesively bonded with an EVA hot melt **adhesive** (one suitable **adhesive** is a hot melt **adhesive** commercially available as 111382-01 from Ato-Findley Adhesives of Wauwatosa, Wis.), may increase in caliper between 10-20% after a post-lamination heat treatment. In this case, a suitable hot melt **adhesive** is applied and the resulting article is cooled to room temperature. Heat treatment may then be performed, for example, raising. . .
DETD . . . first layer 100 and the second layer 200 can be joined using any suitable method, including but not limited to **adhesive** bonding, mechanical bonding, thermal bonding, mechanical-thermal bonding, ultrasonic bonding, and combinations thereof. In particular, in a preferred embodiment, **adhesive** is applied by printing methods, such as a gravure printing, reverse gravure printing, screen printing, flexographic printing, and the like. In one preferred embodiment, EVA hot melt **adhesive** may be screen printed in a lattice pattern generally as shown in FIG. 1. The suitable screen for this embodiment. . .
DETD The **adhesive** is preferably water insoluble so that the article 20 can be wetted with water without delamination of the first and second layers. The **adhesive** is preferably also surfactant tolerant. By "surfactant tolerant" it is meant that the bonding characteristics of the **adhesive** are not degraded by the presence of surfactants. Suitable adhesives include EVA (ethylene vinyl acetate) based hot melt

adhesives. One suitable **adhesive** is a hot melt **adhesive** commercially available as H1382-01 from Ato-Findley Adhesives of Wauwatosa, Wis.

DETD With reference to FIGS. 1 and 2, the hot melt **adhesive** can be applied to the nonwoven second layer 200 in a continuous network defining a discontinuous plurality of unbonded regions 114. In one preferred embodiment, as shown in FIG. 1, the **adhesive** is applied as parallel, spaced apart lines in a first direction, intersected by parallel, spaced apart lines in a second. . . form diamond-shaped patterns of unbonded regions in the final wipe. In the embodiment shown in FIG. 1, the hot melt **adhesive** can be applied in lines having a width of about 0.01 inch to about 0.5 inch, preferably about 0.05 to about 0.07 inch. The spacing between adjacent lines of **adhesive** can be about 0.2 inch to about 2.0, preferably about 0.4 to about 0.6 inches.

DETD With reference to FIG. 3, the hot melt **adhesive** can be applied to the nonwoven second layer 200 in bands which extend generally parallel to the machine direction of the nonwoven second layer 200. The hot melt **adhesive** can be applied in stripes 310 having a width W (FIG. 3) of about 0.125 inch to about 1 inch. The spacing D between adjacent **adhesive** stripes can be about 0.125 inch to about 2 inches. In FIG. 3, four stripes 310A, 310B, 310C, and 310D. . .

DETD When applied as parallel stripes, lines, or bands, the **adhesive** can be applied to the nonwoven second layer 200 using a slot coating applicator. A suitable slot coating applicator is. . . a Nordson MX series hot melter with extrusion head commercially available from the Nordson Company of Norcross, Ga. The 111382-01 **adhesive** referenced above can be applied to the second layer 200 at a temperature of about 350 Fahrenheit, at an application level of about 0.03 grams of **adhesive** per square inch. Immediately following application of the **adhesive** to the nonwoven second layer 200, the nonwoven second layer 200 and the paper first layer 100 can be bonded together by pressing the two layers 100 and 200 together with the **adhesive** disposed between the second layer 200 and the first layer 100. One suitable means for pressing the two layers 100. . .

DETD . . . from Seppic, located in Paris, France); lovastatin; metronidazole; minocycline; mukurossi; neem seed oil; vitamin B3 compounds (such as niaincamide and **nicotinic acid**); nisin; octopirox; panthenol; 1-pentadecanol; peonia extract; peppermint extract; phelladendron extract; 2-phenyl-benzothiophene derivatives; phloretin; PHLOROGINE (available from Secma); phosphatidyl choline; proteolytic. . .

DETD . . . trans); retinol; retinal; retinyl esters (e.g., retinyl acetate, retinyl palmitate, and retinyl proprionate); vitamine B3 compounds (such as niacinamide and **nicotinic acid**), salicylic acid and derivatives thereof (e.g., 5-octanoyl salicylic acid, heptyloxy-4-salicylic acid, and 4-methoxy salicylic acid); sulfur-containing D and L amino. . .

DETD . . . alcohols; lanosterol; lauric acid N laurylglucamide; lipoic acid; N-acetyl cysteine; N-acetyl-L-serine; N methyl-L-Serine; vitamin B3 compounds (such as niacinamide and **nicotinic acid**); palmitic acid; panthenol; panthetine; phosphodiesterase inhibitors; PHYTO/CER (available from Intergen); phytoglycolipid millet extract (available from Barnet Products Distributer, located in. . .

DETD . . . from Rohm and Haas, located in Philadelphia, Pa.); labdanum; lavender; lemon balm oil; lemon grass; methyl paraben; mint; mume; mustard; **myrrh**; neem seed oil; ortho phenyl phenol; olive leaf; parsley; patchouly oil; peony root; PHENONIP (available from Nipa Labs, located in. . .

L3 ANSWER 2 OF 4 USPATFULL

TI Delivery of skin benefit agents via **adhesive** strips

AB A cosmetic product is provided for delivery of skin actives through **adhesive** strips which concurrently remove keratotic plugs from skin pores. The product is a strip including a flexible substrate sheet onto which a composition containing an **adhesive** polymer is deposited. The composition is essentially a polymer of anionic, cationic, nonionic, amphoteric or zwitterionic variety which increases in. . . with wetting occurring just prior to application onto the skin thereby enhancing the composition's adhesivity. Skin agents delivered through the **adhesive** strip include vitamins, herbal extracts, alpha- and beta-hydroxycarboxylic acids, ceramides, anti-inflammatories, antimicrobials, vasoconstrictors, zinc salts and mixtures thereof. The strips. . .

SUMM The invention concerns **adhesive** strips applied to the skin for removing keratotic plugs from pores and concurrent delivery of skin benefit agents.

SUMM . . . employed to deliver herbal extracts to the face. Among the extracts have been glycyrrhizinic acid, .alpha.-bisabolol, azulene, yarrow, coltsfoot, sage, **myrrh**, rosemary and others. See U.S. Pat. No. 5,614,201 and U.S. Pat. No. 5,482,710, both to Slavtcheff et al. These mask. . .

SUMM . . . commerce in a number of countries. Products such as Kao Biore.RTM. and Pond's.RTM. Cleansing Pore Strips are sheets of an **adhesive** coated flexible band-aid shaped strip which when wetted have sufficient adhesivity to remove keratotic plugs from skin pores. The strips are left on the skin for approximately 15-30 minutes to allow **adhesive** polymer to penetrate the pores. Removal of the strip rips away the plugs as well as a layer of skin.. . .

SUMM Now it has been discovered that **adhesive** strips designed to remove keratotic plugs are exceptional vehicles for the delivery of active ingredients into the skin. Actives covered. . .

SUMM . . . salts and esters thereof such as magnesium ascorbyl phosphate, ascorbyl palmitate, L-ascorbyl stearate, dehydroascorbic acid, Vitazyme C and combinations thereof. **Adhesive** carriers of the present invention are particularly useful for Vitamin C delivery because it is very unstable in the presence. . .

SUMM . . . folic acid, inositol and mixtures as well as complexes thereof. Under the term vitamin may also be included thaproline, L-caritine, **nicotinic acid**, nicotinamide and cyproterone acetate.

SUMM . . . o

grape skin	o
grapefruit	o
green tea polyphenyls (i.e. including epicatechin gallate and epigallocaatechin 3-O-gallate)	w
guggalipids	o
harpogophytum	o
hawthorn berries	w
jasmine	o
licorice	w and o
marjoram	o
myrrh gum resin	o
onion	o
pine bark	o
red clover flower	o
resveratrol	o
rosemary	o
sage	w
sesame	o
St. Johns wort	o
strawberry	w
sweet pea	w

tomato o. . .
SUMM Alpha- and beta-hydroxycarboxylic acids ranging from C.sub.2 -C.sub.30 are also suitably delivered by the **adhesive** strips of the present invention. The beta-hydroxycarboxylic acids are primarily exemplified by salicylic acid and C.sub.1 -C.sub.30 ester and salt. . .
SUMM Actives of the present invention will be formulated onto a flexible substract sheet impregnated with an **adhesive** composition containing an anionic, cationic, nonionic, amphoteric or zwitterionic polymer. In a dry state, the composition preferably but not necessarily. . .
SUMM The composition will include an **adhesive** polymer which may either be anionic, cationic, nonionic, amphoteric, zwitterionic or mixtures thereof. Mixtures may be of polymers within any. . .
SUMM Examples of nonionic polymers suitable for **adhesive** film deposition are the copolymers of vinyl acetate and crotonic acid, terpolymers of vinyl acetate, crotonic acid and a vinyl. . .
SUMM Further examples of nonionic **adhesive** polymers are homopolymers of N-vinylpyrrolidone and copolymers of N-vinylpyrrolidone with compatible nonionic monomers such as vinyl acetate and terpolymers of. . .
SUMM Anionic **adhesive** polymers often are derived from the nonionic types which include carboxylic acid functions. Alkaline agents are employed to neutralize the. . .
SUMM Cationic **adhesive** polymers suitable for the present invention may be prepared as homo- or copolymers from monomers including:
SUMM Among suitable amphoteric **adhesive** polymers are those derived from monomers such as:
DETD A variety of polymers were evaluated for their **adhesive** effects in removing keratotic plugs from the skin. The polymers listed in Table I below were coated onto a non-woven. . .
DETD . . . allowed to dry whereupon it was peeled off. The number of plugs removed were counted as they appeared on the **adhesive** patch. Percentage of plugs removed were calculated to reflect efficiency of the test product.

DETD		. . . laid	weak
(1.2 oz/sq. yard)			
Veratec 2006094			
	40-60	Nice appearance	
Polypropylene			
Thermal Bond			
(.6 oz/sq. yard)			
Veratec	10	Poor appearance:	
Polyethylene		When used in application	
(.5 oz/sq. yard)		**adhesive** dried very slow.	

DETD The following experiments were conducted to demonstrate the efficacy of employing **adhesive** strips activated just prior to use by water in the delivery of skin benefiting agents. More particularly, the experiments reported. . .
DETD The study involved four panelists. An **adhesive** strip of approximate size 1.times.3 inches having Gantrez S-97 BF.RTM. as described under Example 2 was coated onto PGI 5255. . .

L3 ANSWER 3 OF 4 USPATFULL
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hawthorn berries w
jasmine o
licorice w and o
marjoram o
myrrh gum resin o
onion o
pine bark o
red clover flower o
resveratrol o
rosemary o
sage w
sesame o
St. Johns wort o
strawberry w
sweet pea w
tomato o. . .

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SUMM . . . strength in swollen condition, however, the capability to swell is limited. For certain purposes those polymer films may be rendered self-**adhesive** by the addition of adequate auxiliaries, however, the **adhesive** effect is extremely reduced when contacting water or due to residual water in the film.

SUMM . . . soaps, fatty acid salts of multivalent metals, betaine, amine oxides, fatty acid esters, mono-, di- or triglycerides, long-chain alcohols, sulphoxides, **nicotinic acid** esters, salicylic acid, N-methylpyrrolidone, 2-pyrrolidone, or urea.

SUMM . . . can be divided into segments which are surrounded or enclosed by the overlying or underlying layer. For instance, a lipophilic **adhesive** layer may be applied to a gel film continuously or divided in the form of points or rhombs, whereby the. . .

SUMM . . . and substrate; in the case of indirect contact the interaction is created by parts of the device, such as, e.g. **adhesive** layers, control elements, or permeable separating elements. In order to prevent drying up or growing in of germs the gel. . .

SUMM . . . the substrate is provided with a securing element. This securing element may, e.g. be a band or bandage, a conventional **adhesive** plaster or an **adhesive** foil.

SUMM . . . film itself, provided that it contains tackifiers, or, if it is multi-layered, at least parts of the contact layer exhibit **adhesive** properties towards the substrate (FIG. 9, 10). A further possibility to fix or secure the device is that the back. . . of larger dimension than the gel film segment and that at least the extending parts of the back layer are self-**adhesive** and that thus the device is fixed on the substrate (FIG. 8).

SUMM . . . For instance, the interaction of the gel film and solid substrates may be that the gel film is used as **adhesive** for anchoring devices on solid surfaces.

SUMM . . . substance serves as control membrane between gel reservoir and skin (FIG. 5), whereby the lipophilic layer, if it is rendered self-**adhesive**, also serves to anchor the gel film on the skin. In another embodiment the gel film is in the form. . .

SUMM . . . or lidocaine; local antibiotics, such as gramicidin or tyrothricine; adstringents, such as, e.g. aluminium salts or plant extracts from sage, **myrrh** or benzoe.

SUMM . . . that during the night volatile active substance is released and inhaled. However, the gel film may as well have an **adhesive** fixation element (FIG. 11, 12) and is applied, after removal of the back layer and protective layer, onto the skin. . .

DETD . . . g Na-carboxymethylcellulose C 1000 (Tylose.RTM.), 3.0 g glycerol, 25.0 g type-A-gelatin, 2.5 g collagen paste (20% in water), 2.5 g **myrrh** tincture, and 2.5 g sage tincture are added in clearly solved condition. The mass is spread on a siliconized polyester. . .

DETD . . . film is covered with a siliconized foil, punched to format and made-up. The gel film can be used as contact **adhesive** for medical articles and exhibits good adhesion and cohesion even on sweaty skin.

DETD . . . larger area dimensions than the gel film (1) and being coated completely (FIG. 8a) or partially (FIG. 8b) with an **adhesive** film (5).

DETD FIG. 9, 10a and 10b show embodiments of a gel film (1) having an **adhesive** layer (5), whereby this **adhesive** layer covers the gel film discontinuously, i.e., broken, either completely (FIG. 10a) or partially (FIG. 10b).

DETD . . . with an control element (6) which is a broken layer and is connected with the back layer (2) via an **adhesive** layer (5) (FIG. 11a). In FIG. 11b a second **adhesive** layer (5') is positioned between gel film (1) and protective layer (3), said **adhesive** layer serves to anchor the gel film (1) onto a desired surface after removal of the protective layer (3).

DETD . . . membrane having larger area dimensions than the gel film (1) and the extending parts of which are covered with an **adhesive** layer (5'). The porous area of control membrane (6) is covered with a back layer (2) which is covered with an **adhesive** film (5). The back layer (2) is of larger area dimension than the porous area of the control membrane (6), e.g., in the form of an extending flap so that the back layer (2) with the **adhesive** film (5) can easily be removed prior to use.

Solvents

Alcohols	n-Amyl acetate	Diisobutyl ketone
Methyl **alcohol**	Butyl lactate	Cyclohexanone
Ethyl **alcohol**	Propylene glycol	Isophorone
n-Propyl **alcohol**	monoethyl ether acetate	Diacetone
alcohol		
Isopropyl **alcohol**	Methyl amyl acetate	Methyl amyl ketone
Isoamyl **alcohol**	Diethyl ether	Acetonitrile
Cyclohexanol	Diisopropyl ether	Nitromethane
Ethylene glycol	Tetrahydrofuran	Nitroethane
Glycerol	Cellosolve"solvent.sup.2	Castor oil
Formamide	Toluene	Linseed oil
Dimethyl	Xylene	Soya
formamide		
Methylene chloride	n-Hexane	Fatty. . .

L3 ANSWER 3 OF 12 USPATFULL on STN
AN 2003:145922 USPATFULL
TI **Gum resin** as a carrier for topical application of pharmacologically active agents
IN Battaglia, Alex, La Jolla, CA, UNITED STATES
PI US 2003099666 A1 20030529
AI US 2002-53313 A1 20020118 (10)
PRAI US 2001-299377P 20010618 (60)
DT Utility
FS APPLICATION
LREP RAE-VENTER LAW GROUP, P.C., P.O. BOX 1898, MONTEREY, CA, 93942-1898
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 759
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides a biological dressing for treatment of a dermatological disease comprised of a **gum resin**, a topically acceptable volatile solvent, and a pharmacologically active agent. The **gum resin** is present in a suitable amount that the composition, when the solvent evaporates, will dry to form a solid coating that sticks to the skin or mucosal membrane to which the composition is applied and maintain the pharmacologically active agent over a sustained period of time in contact with sites on the skin or mucosal membranes exhibiting symptoms of the disease. Methods are provided for treating symptoms of dermatological diseases with such a pharmacological composition. Biological dressings including tincture of **benzoin** and clotrimazole are shown to be efficacious for the long-term amelioration of symptoms of athlete's foot.
TI **Gum resin** as a carrier for topical application of pharmacologically active agents
AB The invention provides a biological dressing for treatment of a dermatological disease comprised of a **gum resin**, a topically acceptable volatile solvent, and a pharmacologically active agent. The **gum resin** is present in a suitable amount that the composition, when the solvent evaporates, will dry to form a solid coating. . . disease. Methods are provided for treating symptoms of dermatological diseases with such a pharmacological composition. Biological dressings including tincture of **benzoin** and clotrimazole are shown to be efficacious for the long-term amelioration of symptoms of athlete's foot.
SUMM [0003] The invention relates to **gum resin** based biological dressings that adhere to the skin and contain one or more pharmacologically active agents for the treatment of. . . symptoms relating to dermatological diseases and those affecting mucous

membranes. The invention is exemplified by biological dressings comprising tincture of **benzoin** and clotrimazole for the treatment of athlete's foot.

SUMM [0009] In medicine, tincture of **benzoin** and mastic gum (Mastisol) have been employed to form a sticky coating on skin prior to the placement of adhesive preparations. Tincture of **benzoin** has also been used to form a biologic dressing over superficial cutaneous wounds as well as apthous ulcers (canker sores). However, the general use of gum resins, such as mastic gum and **benzoin** gum, as semi-permanently applied carriers for increasing the efficacy and usefulness of topological of pharmacological agents has not been disclosed.

SUMM [0010] A tincture of **benzoin** has been used with podophyllin resin (10-25%) in the treatment of genital warts. It is considered by many to be. . . (see U.S. Pat. Nos. 5,063,065 and 5,167,649). Unfortunately, podophyllin resin is toxic, and even when applied in a tincture of **benzoin**, this agent must be removed by rigorous washing 1 to 6 hours post-application. Due to the problems associated with using podophyllin resin in tincture of **benzoin**, other carriers have been sought. As an example, in the treatment of genital warts, Goh, et al. (Singapore Med J. . . reports that podophyllin prepared in 0.25% ethanol can be self-applied and is as efficacious as podophyllin prepared in tincture of **benzoin** and applied in the clinic. Use of tincture of **benzoin** as a biological bandage with compounds that it is desirable to have in long contact with the skin has not. . .

SUMM . . . the effectiveness of treatment of dermatological disorders on the skin or a mucous membrane of a mammal by using a **gum resin** as a carrier for a pharmacologically active agent. The pharmacological compositions are comprised of a **gum resin**, at least one topically acceptable pharmacologically active agent for treatment of a dermatological disorder other than the **gum resin**, wherein the active agent is non-toxic to the mammal being treated when left in contact with the lesion of interest. . . of contacting affected sites on the skin of a patient in need thereof with the pharmacological composition comprised of a **gum resin**, a pharmacological agent or agents, and an evaporative solvent, and allowing it to dry to form a biological dressing. The biological dressing comprises a sticky film of **gum resin** and a pharmacologically active agent left on the skin or mucous membrane after the volatile solvent has evaporated. The dressing. . .

SUMM . . . a non-occlusive but adherent pharmacological composition that is formed by drying on the skin a pharmacologic composition comprised of a **gum resin**, such as **benzoin** or mastic gum, a pharmacologically active agent and topically acceptable volatile solvent, such as ethanol. The biologic dressing forms a. . .

SUMM . . . the vehicle is relatively inexpensive, is pleasant smelling, and the bandage can be conveniently and easily removed, for example with **alcohol**, when desired. Many dermatological conditions are exacerbated by moisture so the water repellent qualities of the dressing also protect the. . . being treated. A further advantage of the subject invention is that various of the gum resins that find use, including **benzoin** and mastisol, are already approved for human use and have been tested and found to be safe for topical application. . .

SUMM . . . an athlete's foot infection for example, application of a more viscous preparation may be preferred. The relative proportions of the **gum resin** carrier, the pharmacologically active agent or agents and the evaporative solvent in the preferred composition can vary widely, and will. . . the intended application is to an affected area on the face, the preferred composition would have a lower

proportion of **gum resin**, to allow for a more thinly applied and less visible and less sticky medical dressing. Generally, the pharmacological compositions of the subject invention will have at least about 10% **gum resin**, more likely about 20%, 30% or 40% **gum resin**, as much as 50% or 60% **gum resin**.

SUMM [0015] The stickiness of the biological dressings is provided by the use of a **gum resin**, generally, naturally occurring gum resins, such as those that are harvested from trees are used, although gum resins also may be prepared by synthetic means (see for example, U.S. Pat. Nos. 5,644,049, 5,429,590 and 4,307,717). Preferred gum resins include **benzoin** resinous exudate harvested from Styracaceae trees, including **Benzoin** Siam from Styrax tonkinesis and **Benzoin** Sumatra from Styrax **benzoin**. Tincture of **benzoin** and **benzoin** compound tincture is readily available through numerous commercial sources, including many drug stores and suppliers of surgical goods. Another resinous. . . Ferndale, Mich. and is also available through suppliers of surgical goods. Other gum resins that can be used include the **gum resin** exudate from Burserceae trees, including Boswellia serrata (also known as Boswellin), Boswellia dalzielli, Boswellia carteri (gum olibanum) and Canarium luzonicum. . . have pharmacological properties, and their topical application may cause irritation in certain patients or exacerbate certain conditions. Prudent choice of **gum resin** to be used in preparing a particular biological dressing will take into consideration the dermatological disorder to be treated and. . .

SUMM . . . attribute, the pharmacological composition is prepared with a volatile solvent that evaporates to leave a hydrophobic coating comprised of the **gum resin** and the pharmacological agent on the skin. Volatile solvents for use in the subject compositions include alcohols such as methanol,. . . as they are compatible with other components of the pharmacological composition and topically acceptable to the majority of patients. The **gum resin** of choice is diluted in the volatile solvent such that the concentration of solvent comprises at least about 40% or. . . or 80%, or as much as about 90% of the total composition. A particularly preferred composition is a tincture of **benzoin**, which is comprised of **benzoin** in about 60%, 70%, 80% or 90% ethanol.

SUMM . . . bandage approximates the concentration of agent that is used in existing topical formulations. However, because the adherent properties of a **gum resin**-based biological dressing allow for extended and continuous exposure of a skin lesion to drug, reduced concentration formulations are possible and. . .

SUMM [0022] A **gum resin** dressing can also be prepared for the treatment of superficial parasitic infections, such as scabies, nits and lice (including head. . .

SUMM [0023] For treating pain associated with arthritis, joint inflammation and muscle pain a **gum resin** dressing can be prepared containing one or more active ingredients such as menthol (10%), methyl salicylate (10%) and capsaicin (0.01%-10%). . .

SUMM . . . 0.1%, 0.2%), isotretinoin, adapaline (0.1%), azelaic acid (20%), clindamycin, erythromycin, tetracycline, benzoyl peroxide (2.5%, 5%, 10%), and sulfacetamide (10%). A **gum resin** composition comprising metronidazole (0.75%) finds use in the treatment of rosacea. Biological dressings comprising anthralin (0.1%, 0.2%, 0.25%, 0.4% and. . .

SUMM . . . and Hodgkin's disease. Oftentimes best results are achieved when using both an H.sub.1 and an H.sub.2 blocker. Additionally, a medicated **gum resin** dressing comprising the anti-pruritic doxepin (5%) finds use in relieving the itching in patients with certain types of eczema. Topical. . .

SUMM [0027] A **gum resin** carrier also finds use in the treatment of superficial dematological viral infections, whenever topical anti-viral medications would be indicated. Particularly. . .

SUMM . . . with varicella-zoster virus (shingles, chicken pox) with a topically compatible local anesthetic. A preferred pharmacological agent for use in a **gum resin**-based dressing prepared for treating pain associated with dermatological disorders is lidocaine (0.5%, 1%, 2%, 5%, 10%, 20%, 25%, see U.S.. . .

SUMM [0029] **Gum resin** compositions containing synthetic hormones find use in the treatment of indications associated with abnormal hormone production as well as contraception. For example, a **gum resin** composition containing transdermal testosterone, generally about 2.5-5.0 mg per application, or equivalent other androgenic compound(s) in an appropriate amount can. . . males with congenital or acquired primary hypogonadism, or congenital or acquired hypogonadotropic hypogonadism and other similar disorders. In women, a **gum resin** composition containing estradiol (an active form of estrogen) or other equivalent estrogenic compound(s) in an appriopriate amount, can be used. . . primary ovarian failure, non-steroid dependent inoperable breast cancer and vasomotor symptoms associated with menopause and prevention of post-menopasual osteoporosis. A **gum resin** composition containing an estrogenic compound, such as for example estradiol in an amount sufficient for the treatment of such indications. . .

SUMM . . . (progestin) can be used to prevent pregnancy by inhibiting ovulation and thickening the mucosa of the cervix. In addition, a **gum resin** composition containing a progestin compound such as norethindrone (0.14-0.25 mg per application) can be used for treating abnormal menstrual disorders. . . as amenorrhea, abnormal uterine bleeding and endometriosis, applications generally will be to the skin. The site of application of the **gum resin** composition will vary depending upon the intended use. Generally the site of application will be to the skin at a. . .

SUMM [0031] **Gum resin** compositions are also suitable for sustained delivery of pharmacological agents use for hair growth retardation and stimulation. For treatments intending. . .

SUMM [0032] A **gum resin** vehicle additionally finds use in preparing protective compositions comprising sun protecting, ultraviolet absorptive agents. Sunscreens for use in a **gum resin** -based dressing include aminobenzoate agents, such as p-aminobenzoic acid (PABA), ethyl 4-[bis(hydroxypropyl)] aminobenzoate, octyl dimethyl PABA, PABA propoxylate, glyceral PABA, 2-ethylhexyl. . . salicylate; and other sunscreen agents, such as titanium dioxide and zinc oxide. For use as a sunscreen, generally a thin **gum resin** /ultraviolet absorptive agent preparation is applied to areas of the skin that will be exposed to the sun. For some situations, protection of exposed skin from the sun will be best accomplished by applying a thicker **gum resin** formulation, for example, for application of sunscreen to protect the skin of the nose at high altitudes. Advantageously, a **gum resin**/sunscreen compound formulation is particularly effective at providing long-lasting sun protection to exposed skin through resisting removal by abrasion or moisture

SUMM [0033] **Gum resin** compositions may be prepared with pharmacological agents used for pigmenting or de-pigmenting the skin, for instance, for use in treating. . .

SUMM . . . (20%), for the inhibition of perspiration of isolated dermal areas, for instance to aid in carrying out surgical procedures. A **gum resin** composition comprising nitroglycerin (0.5%, 1.0%, 2.0%) will find use in the sustained transdermal delivery of this anti-anginal agent which can. . . nausea, due to motion sickness for example, can be provided using a biological dressing comprising

scopolamine. For anti-nausea purposes, a **gum resin** /scopolamine composition would be applied, behind the ear for example, before the onset of activity that potentially would induce nausea. Additionally, a **gum resin** dressing can be prepared for the sustained delivery of pharmacological agents useful in the treatment of superficial cancerous and pre-cancerous. . .

SUMM [0035] A **gum resin** carrier may also be prepared with an insect repellant as the pharmacologic agent. Examples of insect repellant compounds suitable for. . . phthalate, dimethyl ethyl hexanediol, carbate, butopyronoxyl, di-n-propyl isocinchonmeronate, N-octyl bicycloheptene, dicarboximide, and 2,3,4,5-bis(2-butylene)tetra-hydro-2-furaldehyde. For use as an insect repellent, a **gum resin** preparation is preferably applied as a thin coat to areas of the skin most likely to be attacked by an. . . the insect repellant compound used repels insects without irritating the skin. Advantageously, as with the sunscreen preparations described above, a **gum resin**/insect repellent formulation is particularly effective at providing long-lasting insect repellency on the skin through resisting removal by abrasion or moisture.

SUMM [0036] **Gum resin** compositions also find use in the treatment of drug addiction. Compositions containing nicotine, generally about in an amount sufficient to. . .

SUMM . . . paste, a liquid, a semi-solid, a gel, a suspension, an emulsion or the like, provided that the formulation allows the **gum resin** carrier and pharmacologically active agent to effectively adhere together to the skin surface to which they are applied and to. . . hydrophobic film or coating on the skin surface to which it has been applied. The solidified film residue comprises the **gum resin** carrier, and the pharmacologically active agent or agents. By forming a barrier holding the pharmacologically active agent to the surface, the **gum resin** permits a sustained, continuous release and a prolonged exposure to the agent or agents. Continuous exposure of the skin to. . . place. The biologic dressing, therefore can effect symptomatic relief with less frequent applications. For most dermatological disorders treated using a **gum resin**-based dressing, one or two daily applications will be sufficient to promote regression or disappearance of the targeted skin lesions. For. . .

DETD Treatment of Athlete's Foot (Tinea pedis) with a **Gum Resin**-based Biological Dressing Comprised of Tincture of **Benzoin** and Clotrimazole

DETD [0041] Tincture of **benzoin** compositions are produced with standard tincture of **benzoin** (3M, Minneapolis, Minn.). Replicated experiments were performed with a composition comprising tincture of **benzoin** with 60% **alcohol** plus 1% clotrimazole. To determine efficacy in treating athlete's foot, the **benzoin**/clotrimazole composition was applied to cases of athlete's foot, replicated 5 times. In each replicate, the composition led to complete clearance. . . within 1 week, when applied twice daily for 7 days. No allergic reaction was noted in this test, although the **alcohol** component reportedly led to stinging when applied to deep fissures. Minimal lint from the socks was noted on the coating where the composition was applied but was easily removed with ethanol. Efficacy of the **benzoin**/clotrimazole composition was compared to controls of tincture of **benzoin** alone and no treatment. The **benzoin**/clotrimazole composition provided symptomatic relief and led to healing more quickly than tincture of **benzoin** alone, though tincture of **benzoin** alone improved symptoms and signs more quickly when compared to no treatment. This is likely due to the fact that the sticky coating from the tincture tends to repel moisture. Efficacy of the **benzoin**/clotrimazole composition also was compared to commercially available medications such as Lamisil.RTM.,

Lotrimin.RTM., Mycelex.RTM. and Tinactin.RTM.. In comparison, the **benzoin**/clotrimazole composition greatly decreased the time necessary for treatment compared to formulations of each of the commercial medications, particularly when the commercial medications were administered in the form of powder, liquid, solution, spray or gel. The **benzoin**/clotrimazole composition also decreased the time necessary for treatment when compared to cream versions of the above medications and was much. . .

DETD . . . improved symptomatic relief from a dermatological disorder that can be achieved by administering a topically acceptable pharmacological agent in a **gum resin** carrier that forms a biological bandage in comparison presently available carriers. With a **gum -resin**-based biological dressing, relief from the unpleasant symptoms associated with a dermatological lesion is realized more efficiently and in a more. . .

CLM What is claimed is:

1. A pharmacological composition comprising: a) a **gum resin**; b) at least one topically acceptable pharmacologically active agent other than said **gum resin** that is effective as a treatment for ameliorating symptoms of a disease of skin or a mucous membrane of a. . . membrane greater than 6 hours without toxic effects to said mammal; and c) a topically acceptable volatile solvent for said **gum resin** and said pharmacologically active agent.

2. The composition according to claim 1, wherein said **gum resin** comprises **benzoin**.

14. A pharmacological composition comprising: a) a **benzoin**; b) clotrimazole; and c) ethanol.

27. A pharmacological composition comprising: a) a **benzoin**; b) 1% clotrimazole ; and c) 60% ethanol.

L3 ANSWER 4 OF 12 USPATFULL on STN
AN 2003:99227 USPATFULL
TI **Gum resin** as a carrier for topical application of pharmacologically active agents
IN Battaglia, Alex, La Jolla, CA, UNITED STATES
Beim, Eva, La Jolla, CA, UNITED STATES
PI US 2003068331 A1 20030410
AI US 2002-279704 A1 20021023 (10)
RLI Continuation-in-part of Ser. No. US 2002-53313, filed on 18 Jan 2002, PENDING
PRAI US 2001-299377P 20010618 (60)
DT Utility
FS APPLICATION
LREP Rae-Venter Law Group, P.C., PO Box 1898, Monterey, CA, 93942-1898
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 895
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides a biological dressing for treatment of a dermatological disease comprised of a **gum resin**, a topically acceptable volatile solvent, and a pharmacologically active agent. The **gum resin** is present in a suitable amount that the composition, when the solvent evaporates, will dry to form a solid coating that sticks to the skin or mucosal membrane to which the composition is applied and maintain the pharmacologically active agent over a sustained period of time in contact with sites on the skin or

mucosal membranes exhibiting symptoms of the disease. Methods are provided for treating symptoms of dermatological diseases with such a pharmacological composition. Biological dressings including tincture of **benzoin** and clotrimazole are shown to be efficacious for the long-term amelioration of symptoms of athlete's foot.

TI **Gum resin** as a carrier for topical application of pharmacologically active agents

AB The invention provides a biological dressing for treatment of a dermatological disease comprised of a **gum resin**, a topically acceptable volatile solvent, and a pharmacologically active agent. The **gum resin** is present in a suitable amount that the composition, when the solvent evaporates, will dry to form a solid coating. . . disease. Methods are provided for treating symptoms of dermatological diseases with such a pharmacological composition. Biological dressings including tincture of **benzoin** and clotrimazole are shown to be efficacious for the long-term amelioration of symptoms of athlete's foot.

SUMM [0003] The invention relates to **gum resin** or other film forming agent based biological dressings that adhere to the skin and contain one or more pharmacologically active. . . symptoms relating to dermatological diseases and those affecting mucous membranes. The invention is exemplified by biological dressings comprising tincture of **benzoin** and clotrimazole for the treatment of athlete's foot.

SUMM [0009] In medicine, tincture of **benzoin** and mastic gum (Mastisol) have been employed to form a sticky coating on skin prior to the placement of adhesive preparations. Tincture of **benzoin** has also been used to form a biologic dressing over superficial cutaneous wounds as well as apthous ulcers (canker sores). However, the general use of gum resins, such as mastic gum and **benzoin** gum, as semi-permanently applied carriers for increasing the efficacy and usefulness of topological of pharmacological agents has not been disclosed.

SUMM [0010] A tincture of **benzoin** has been used with podophyllin resin (10-25%) in the treatment of genital warts. It is considered by many to be. . . (see U.S. Pat. Nos. 5,063,065 and 5,167,649). Unfortunately, podophyllin resin is toxic, and even when applied in a tincture of **benzoin**, this agent must be removed by rigorous washing 1 to 6 hours post-application. Due to the problems associated with using podophyllin resin in tincture of **benzoin**, other carriers have been sought. As an example, in the treatment of genital warts, Goh, et al. (Singapore Med J. . . reports that podophyllin prepared in 0.25% ethanol can be self-applied and is as efficacious as podophyllin prepared in tincture of **benzoin** and applied in the clinic. Use of tincture of **benzoin** as a biological bandage with compounds that it is desirable to have in long contact with the skin has not. . .

SUMM . . . the effectiveness of treatment of dermatological disorders on the skin or a mucous membrane of a mammal by using a **gum resin** or other film forming agent as a carrier for a pharmacologically active agent. The pharmacological compositions are comprised of a **gum resin** or other film forming agent, at least one topically acceptable pharmacologically active agent for treatment of a dermatological disorder other than the **gum resin** or other film forming agent, wherein the active agent is non-toxic to the mammal being treated when left in contact. . . of contacting affected sites on the skin of a patient in need thereof with the pharmacological composition comprised of a **gum resin** or other film forming agent, a pharmacological agent or agents, and an evaporative solvent, and allowing it to dry to form a biological dressing. The biological dressing comprises a sticky film of **gum resin** or other agent which forms a film on the

skin and a pharmacologically active agent; the latter remains on the. . .

SUMM . . . a non-occlusive but adherent pharmacological composition that is formed by drying on the skin a pharmacologic composition comprised of a **gum resin**, such as **benzoin** or mastic gum or other composition that can form a barrier film on the skin, such as compositions that are. . .

SUMM . . . the vehicle is relatively inexpensive, is pleasant smelling, and the bandage can be conveniently and easily removed, for example with **alcohol**, when desired. Many dermatological conditions are exacerbated by moisture so the water repellent qualities of the dressing also protect the. . .

SUMM [0014] Further advantages of the subject invention include that various of the gum resins that find use, including **benzoin** and mastisol, and wound sealing agents are already approved for human use and have been tested and found to be safe for topical application on non-human mammals; the wound sealing agents have the advantage of being able to deliver **alcohol** insoluble medications while reducing pain during application to an open wound.

SUMM . . . a pharmacological composition comprising an agent that can be used to ameliorate the symptoms of a dermatological disease and a **gum resin** dissolved in a volatile solvent. Generally, the pharmacological composition is prepared as a sticky slurry or solution of the film. . . or a mucosal membrane. The consistency of the pharmacological composition can be varied by adjusting the ratio of solvent to **gum resin** in the composition to achieve the desired consistency for application to a particular site. For areas where evaporation of solvent. . .

SUMM [0016] The relative proportions of the **gum resin** or other film forming agent, the pharmacologically active agent or agents and the evaporative solvent in the preferred composition can. . . the intended application is to an affected area on the face, the preferred composition would have a lower proportion of **gum resin** or other film forming agent, to allow for a more thinly applied and less visible and less sticky medical dressing. Generally, the pharmacological compositions of the subject invention will have at least about 10% **gum resin** or other film forming agent, more likely about 20%, 30% or 40% **gum resin** or other film forming agent, and as much as 50% or 60% **gum resin** or other film forming agent.

SUMM [0017] The stickiness of the biological dressings is provided by the use of a **gum resin** or other film forming agent. The gum resins that are used generally are naturally occurring gum resins, such as those. . . may be prepared by synthetic means (see for example, U.S. Pat. Nos. 5,644,049, 5,429,590 and 4,307,717). Preferred gum resins include **benzoin** resinous exudate harvested from Styracaceae trees, including **Benzoin** Siam from Styrax Tonkinesis and **Benzoin** Sumatra from Styrax **Benzoin**. Tincture of **benzoin** and **benzoin** compound tincture is readily available through numerous commercial sources, including many drug stores and suppliers of surgical goods. Another resinous. . . Ferndale, Mich. and is also available through suppliers of surgical goods. Other gum resins that can be used include the **gum resin** exudate from Burserceae trees, including Boswellia serrata (also known as Boswellin), Boswellia dalzielli, Boswellia carteri (gum olibanum) and Canarium luzonicum. . . pharmacological properties, and their topical application may cause irritation in certain patients or exacerbate certain conditions. Prudent choice of the **gum resin** to be used in preparing a particular biological dressing takes into consideration the dermatological disorder to be treated and the. . .

SUMM . . . attribute, the pharmacological composition is prepared with a

volatile solvent that evaporates to leave a hydrophobic coating comprised of the **gum resin** or other film forming agent and the pharmacological agent on the skin. Volatile solvents for use in the subject compositions. . . as they are compatible with other components of the pharmacological composition and topically acceptable to the majority of patients. The **gum resin** of choice is diluted in the volatile solvent such that the concentration of solvent comprises at least about 40% or. . . or 80%, or as much as about 90% of the total composition. A particularly preferred composition is a tincture of **benzoin**, which is comprised of **benzoin** in about 60%, 70%, 80% or 90% ethanol.

SUMM . . . bandage approximates the concentration of agent that is used in existing topical formulations. However, because the adherent properties of a **gum resin**-based biological dressing allow for extended and continuous exposure of a skin lesion to drug, reduced concentration formulations are possible and. . .

SUMM [0025] A **gum resin** or other film forming agent dressing can also be prepared for the treatment of superficial parasitic infections, such as scabies,. . .

SUMM [0026] For treating pain associated with arthritis, joint inflammation and muscle pain a **gum resin** or other film forming agent dressing can be prepared containing one or more active ingredients such as menthol (10%), methyl. . .

SUMM . . . 0.1%, 0.2%), isotretinoin, adapaline (0.1%), azelaic acid (20%), clindamycin, erythromycin, tetracycline, benzoyl peroxide (2.5%, 5%, 10%), and sulfacetamide (10%). A **gum resin** or other film forming agent composition comprising metronidazole (0.75%) finds use in the treatment of rosacea. Biological dressings comprising anthralin. . .

SUMM . . . and Hodgkin's disease. Oftentimes best results are achieved when using both an H.sub.1 and an H.sub.2 blocker. Additionally, a medicated **gum resin** or other film forming agent dressing comprising the anti-pruritic doxepin (5%) finds use in relieving the itching in patients with. . .

SUMM [0030] A **gum resin** or other film forming agent carrier also finds use in the treatment of superficial dematological viral infections, whenever topical anti-viral. . .

SUMM . . . with varicella-zoster virus (shingles, chicken pox) with a topically compatible local anesthetic. A preferred pharmacological agent for use in a **gum resin**-based dressing prepared for treating pain associated with dermatological disorders is lidocaine (0.5%, 1%, 2%, 5%, 10%, 20%, 25%, see U.S.. . .

SUMM [0032] **Gum resin** or other film forming agent compositions containing synthetic hormones find use in the treatment of indications associated with abnormal hormone production as well as contraception. For example, a **gum resin** or other film forming agent composition containing transdermal testosterone, generally about 2.5-5.0 mg per application, or equivalent other androgenic compound(s). . . males with congenital or acquired primary hypogonadism, or congenital or acquired hypogonadotropic hypogonadism and other similar disorders. In women, a **gum resin** or other film forming agent composition containing estradiol (an active form of estrogen) or other equivalent estrogenic compound(s) in an. . . primary ovarian failure, non-steroid dependent inoperable breast cancer and vasomotor symptoms associated with menopause and prevention of post-menopasual osteoporosis. A **gum resin** or other film forming agent composition containing an estrogenic compound, such as for example estradiol in an amount sufficient for. . .

SUMM . . . (progestin) can be used to prevent pregnancy by inhibiting ovulation and thickening the mucosa of the cervix. In addition, a **gum resin** or other film forming agent composition containing a progestin compound such as norethindrone (0.14-0.25 mg per

application) can be used. . . as amenorrhea, abnormal uterine bleeding and endometriosis, applications generally will be to the skin. The site of application of the **gum resin** or other film forming agent composition will vary depending upon the intended use. Generally the site of application will be. . .

SUMM [0034] **Gum resin** or other film forming agent compositions are also suitable for sustained delivery of pharmacological agents use for hair growth retardation. . . hair growth, compositions comprising minoxidil (1%, 2%, 5%) are prepared. For other topical formulations that can be used with the **gum resin** or other film forming agents, see U.S. Pat. No. 6,184,249. For treatment intending to retard hair growth compositions comprising eflornithine. . .

SUMM [0035] A **gum resin** or other film forming agent vehicle additionally finds use in preparing protective compositions comprising sun protecting, ultraviolet absorptive agents. Sunscreens for use in a **gum resin** or other film forming agent-based dressing include aminobenzoate agents, such as p-aminobenzoic acid (PABA), ethyl 4-[bis(hydroxypropyl)] aminobenzoate, octyl dimethyl PABA,. . . salicylate; and other sunscreen agents, such as titanium dioxide and zinc oxide. For use as a sunscreen, generally a thin **gum resin** or other film forming agent/ultraviolet absorptive agent preparation is applied to areas of the skin that will be exposed to. . . the sun. For some situations, protection of exposed skin from the sun will be best accomplished by applying a thicker **gum resin** or other film forming agent formulation, for example, for application of sunscreen to protect the skin of the nose at high altitudes. Advantageously, a **gum resin** or other film forming agent/sunscreen compound formulation is particularly effective at providing long-lasting sun protection to exposed skin through resisting. . .

SUMM [0036] **Gum resin** or other film forming agent compositions may be prepared with pharmacological agents used for pigmenting or de-pigmenting the skin, for. . .

SUMM . . . (20%), for the inhibition of perspiration of isolated dermal areas, for instance to aid in carrying out surgical procedures. A **gum resin** or other film forming agent composition comprising nitroglycerin (0.5%, 1.0%, 2.0%) will find use in the sustained transdermal delivery of. . . nausea, due to motion sickness for example, can be provided using a biological dressing comprising scopolamine. For anti-nausea purposes, a **gum resin** or other film forming agent/scopolamine composition would be applied, behind the ear for example, before the onset of activity that potentially would induce nausea. Additionally, a **gum resin** or other film forming agent dressing can be prepared for the sustained delivery of pharmacological agents useful in the treatment. . .

SUMM [0038] A **gum resin** or other film forming agent carrier may also be prepared with an insect repellant as the pharmacologic agent. Examples of. . . phthalate, dimethyl ethyl hexanediol, carbate, butopyronoxyl, di-n-propyl isocinchonmeronate, N-octyl bicycloheptene, dicarboximide, and 2,3,4,5-bis(2-butylene)tetra-hydro-2-furaldehyde. For use as an insect repellent, a **gum resin** or other film forming agent preparation is preferably applied as a thin coat to areas of the skin most likely. . . the insect repellant compound used repels insects without irritating the skin. Advantageously, as with the sunscreen preparations described above, a **gum resin** or other film forming agent/insect repellent formulation is particularly effective at providing long-lasting insect repellency on the skin through resisting. . .

SUMM [0039] **Gum resin** or other film forming agent

compositions also find use in the treatment of drug addiction. Compositions containing nicotine, generally about. . .

SUMM . . . 22 carbon atoms, such as caproic, octanoic, lauric, palmitic, stearic, linoleic, linolenic, olesteric and oleic acids with an aliphatic polyhydric **alcohol** or its cyclic anhydride. Mixed esters, such as mixed or natural glycerides, can be employed.

SUMM . . . paste, a liquid, a semi-solid, a gel, a suspension, an emulsion or the like, provided that the formulation allows the **gum resin** or other film forming agent carrier and pharmacologically active agent to effectively adhere together to the skin surface to which. . .

SUMM . . . hydrophobic film or coating on the skin surface to which it has been applied. The solidified film residue comprises the **gum resin** or other film forming agent carrier, and the pharmacologically active agent or agents. By forming a barrier holding the pharmacologically active agent to the surface, the **gum resin** or other film forming agent permits a sustained, continuous release and a prolonged exposure to the agent or agents. Continuous. . . place. The biologic dressing, therefore can effect symptomatic relief with less frequent applications. For most dermatological disorders treated using a **gum resin** or other film forming agent-based dressing, one or two daily applications will be sufficient to promote regression or disappearance of. . .

DETD [0049] Treatment of Athlete's Foot (Tinea Pedis) with a **Gum Resin**-Based Biological Dressing Comprised of Tinture of **Benzoin** and Clotrimazole

DETD [0050] Tincture of **benzoin** compositions are produced with standard tincture of **benzoin** (3M, Minneapolis, Minn.). Replicated experiments were performed with a composition comprising tincture of **benzoin** with 60% **alcohol** plus 1% clotrimazole. To determine efficacy in treating athlete's foot, the **benzoin**/clotrimazole composition was applied to cases of athlete's foot, replicated 5 times. In each replicate, the composition led to complete clearance. . . within 1 week, when applied twice daily for 7 days. No allergic reaction was noted in this test, although the **alcohol** component reportedly led to stinging when applied to deep fissures. Minimal lint from the socks was noted on the coating where the composition was applied but was easily removed with ethanol. Efficacy of the **benzoin**/clotrimazole composition was compared to controls of tincture of **benzoin** alone and no treatment. The **benzoin**/clotrimazole composition provided symptomatic relief and led to healing more quickly than tincture of **benzoin** alone, though tincture of **benzoin** alone improved symptoms and signs more quickly when compared to no treatment. This is likely due to the fact that the sticky coating from the tincture tends to repel moisture. Efficacy of the **benzoin**/clotrimazole composition also was compared to commercially available medications such as Lamisil.RTM., Lotrimin.RTM., Mycelex.RTM. and Tinactin.RTM.. In comparison, the **benzoin**/clotrimazole composition greatly decreased the time necessary for treatment compared to formulations of each of the commercial medications, particularly when the commercial medications were administered in the form of powder, liquid, solution, spray or gel. The **benzoin**/clotrimazole composition also decreased the time necessary for treatment when compared to cream versions of the above medications and was much. . .

DETD . . . improved symptomatic relief from a dermatological disorder that can be achieved by administering a topically acceptable pharmacological agent in a **gum resin** carrier that forms a biological bandage in comparison presently available carriers. With a **gum -resin**-based biological dressing, relief from the unpleasant symptoms associated with a dermatological lesion is realized more

efficiently and in a more. . .

CLM What is claimed is:

1. A pharmacological composition comprising: a) a **gum resin**; b) at least one topically acceptable pharmacologically active agent other than said **gum resin** that is effective as a treatment for ameliorating symptoms of a disease of skin or a mucous membrane of a. . . membrane greater than 6 hours without toxic effects to said mammal; and c) a topically acceptable volatile solvent for said **gum resin** and said pharmacologically active agent.

2. The composition according to claim 1, wherein said **gum resin** comprises **benzoin**.

14. A pharmacological composition comprising: a) a **benzoin**; b) clotrimazole; and c) ethanol.

27. A pharmacological composition comprising: a) a **benzoin**; b) 1% clotrimazole; and c) 60% ethanol.

29. A unit dosage form comprising: a) a **benzoin**; b) from about 0.5% to about 2% clotrimazole ; and c) 60% ethanol.

L3 ANSWER 5 OF 12 USPATFULL on STN
AN 2002:17367 USPATFULL
TI Anisotropically electroconductive film
IN Sakurai, Ryo, Tokyo, JAPAN
Hiraoka, Hidetoshi, Tokyo, JAPAN
Okada, Tokuo, Tokyo, JAPAN
Miura, Teruo, Tokyo, JAPAN
Morimura, Yasuhiro, Tokyo, JAPAN
PA BRIDGESTONE CORPORATION (non-U.S. corporation)
PI US 2002010247 A1 20020124
AI US 2001-915137 A1 20010726 (9)
RLI Continuation of Ser. No. WO 2000-JP8474, filed on 30 Nov 2000, UNKNOWN
PRAI JP 1999-345065 19991203
JP 1999-345066 19991203
JP 1999-354715 19991214
DT Utility
FS APPLICATION
LREP KANESAKA AND TAKEUCHI, 1423 Powhatan Street, Alexandria, VA, 22314
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1217
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An anisotropically electroconductive film, which has a high reliability in its capacity for conducting electricity and also a good adhesion under such an adhesive condition that the film is heated at a temperature of 130.degree. C. or less for a short period of time, has a layer of an adhesive within which electroconductive particles are distributed. The adhesive is composed of a thermosetting resin composition including a base resin, a reactive compound, an organic peroxide and a reaction accelerating compound, and also the electroconductive particles incorporated into the thermosetting resin composition. The base resin is a polyacetalized resin which is obtained by acetalizing a polyvinyl **alcohol**. The reactive compound is at least one selected from a group consisting of acryloxy group-bearing compounds, methacryloxy group-bearing compounds and epoxy group-bearing compounds. The reaction accelerating compound is a compound which has a radically reactive group and alkali-reactive group as its end groups. An

anisotropically electroconductive film, which has a good adhesion to both ITO and SiO.sub.x, has an adhesive composed of a thermoset resin composition including a base resin, a melamine resin, and the electroconductive particles. An anisotropically electroconductive film of which the adhesive can be easily controlled in its reaction rate of hardening and which has a high reliability in conductivity and also a good adhesion under such an adhesive condition that the film is heated at a low temperature and under a low pressure, has a layer of the adhesive containing electroconductive particles dispersed therein and which is composed of a thermosetting resin composition including a base resin, a polymerization inhibitor, and the electroconductive particles.

AB . . . incorporated into the thermosetting resin composition. The base resin is a polyacetalized resin which is obtained by acetalizing a polyvinyl **alcohol**. The reactive compound is at least one selected from a group consisting of acryloxy group-bearing compounds, methacryloxy group-bearing compounds and. . .

SUMM . . . electroconductive film composed of a thermoset or photosetting adhesive which consists mainly of a polyacetalized resin obtained by acetalizing polyvinyl **alcohol**. The anisotropically electroconductive film has a high adhesive strength, a good workability and also a high resistance to humidity and. . .

SUMM . . . accelerating compound, and the electroconductive particles. The base resin is a polyacetalized resin which is obtained by acetalizing a polyvinyl **alcohol**. The reactive compound is at least one selected from the group consisting of acryloxy group-bearing compounds, methacryloxy group-bearing compounds and. . .

SUMM [0038] In the second aspect, the base resin is preferably polyacetalized resin obtained by acetalizing polyvinyl **alcohol** or a (meth-)acrylic resin obtained by polymerizing acrylic monomers and/or methacrylic monomers.

SUMM [0047] In the third aspect, the base resin is preferable to be polyacetalized resin obtained by acetalizing polyvinyl **alcohol** or (meth-)acrylic resin obtained by polymerizing acrylic monomers and/or methacrylic monomers.

DETD . . . of the thermosetting resin composition of which the adhesive is composed of a polyacetalized resin obtained by acetalizing a polyvinyl **alcohol**, and the polyacetalized resin is preferable to have acetal groups at a rate of 30 mole percent or more. When. . .

DETD . . . lauryl, cycrohexyl group, tetrahydrofurfuryl group, aminoethyl group, 2-hydroxyethyl group, 3-hydroxypropyl group, 3-chloro-2-hydroxypropyl group and the like. The ester of multifunctional **alcohol** may be used just as the aboves, such as: ethylene glycol, triethylen glycol, polypropylene glycol, polyethylene glycol, trimethylolpropane and pentaerythritol.. . .

DETD . . . or synthetic resin. The natural hydrocarbon resin may be rosin, rosin derivatives or terpene resin. Examples of the rosin are **gum resin**, tall oil resin and wood resin. The rosin derivative may be hydrogenated rosin, disproportionated rosin, polymerized rosin, esterified rosin and. . .

DETD . . . base resin of the resin composition of which the film is composed is polyacetalized resin obtained by acetalizing a polyvinyl **alcohol**, or (meth-)acrylic resin obtained by polymerizing acrylic monomers and/or methacrylic monomers. The preferred polyacetalized resin is the same referred in. . .

DETD . . . from among acrylic esters or methacrylic esters. For example, ester of an acrylic acid or methacrylic acid and an aliphatic **alcohol** having the number of carbon of 1 to 20, particularly 1 to 18 and having at least a non-substituting group. . .

DETD [0088] The acrylic monomer and methacrylic monomer are preferably ester of an acrylic acid or methacrylic acid and a monovalent **alcohol**, particularly an aliphatic. The aliphatic monovalent **alcohol** is the one having an alcoholic hydroxyl group which is not bonded to an

aromatic ring such as a phenyl. . .

DETD . . . initiators of radical-photopolymerizations, benzophenone, methyl o-benzoylbenzoate, 4-benzoyl-4'-methyldiphenylsulfide, isopropylthioxanthone, diethylthioxanthone, ethyl 4-(diethylamino)benzoate, etc. may be used as a hydrogen-pulling type initiator, **benzoin** ether, benzoylpropyl ether, benzyldimethyl ketal, etc. may be used as an intramolecular-cleaving type initiator, 2-hydroxy-2-methyl- 1-phenylpropane- 1-one, 1-hydroxycyclohexylphenylketone, alkylphenylglyoxylate, diethoxyacetophenone. . .

CLM What is claimed is:

. . . reaction accelerating compound, and said electroconductive particles, said base resin is polyacetalized resin which is obtained by acetalizing a polyvinyl **alcohol**, said reactive compound is at least one selected from the group consisting of acryloxy group-bearing compounds, methacryloxy group-bearing compounds and. . .

. . . film as claimed in claims 11, wherein said base resin is a polyacetalized resin which is obtained by acetalizing polyvinyl **alcohol**, or (meth-)acrylic resin which is obtained by polymerizing acrylic monomers and/or methacrylic monomers.

. . . film as claimed in claim 20, wherein said base resin is a polyacetalized resin which is obtained by acetalizing polyvinyl **alcohol**, or (meth-)acrylic resin which is obtained by polymerizing acrylic monomers and/or methacrylic monomers.

L3 ANSWER 6 OF 12 USPATFULL on STN

AN 1999:61203 USPATFULL

TI Radiation-curable acrylate/silicone pressure-sensitive adhesive coated tapes adherable to paint coated substrates

IN Mazurek, Mieczyslaw H., St. Paul, MN, United States
Kinning, David J., St. Paul, MN, United States
Kantner, Steven S., St. Paul, MN, United States

PA Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)

PI US 5907018 19990525

AI US 1993-155476 19931119 (8)

RLI Division of Ser. No. US 1991-672356, filed on 20 Mar 1991, now patented, Pat. No. US 5264278

DT Utility

FS Granted

EXNAM Primary Examiner: Davis, Jenna L.

LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.

CLMN Number of Claims: 2

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1245

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides an acrylate/silicone pressure-sensitive adhesive tape having improved adhesion to painted surfaces and low temperature performance. The pressure-sensitive adhesive tape comprises:

(a) a pressure-sensitive adhesive layer comprising a polymerized pressure sensitive adhesive composition wherein said pressure sensitive adhesive composition comprises:

(I) about 25 to about 99 weight percent of polymer of the formula ##STR1## wherein: X, Y, D, R, R.sup.1, R.sup.2, R.sup.3, R.sup.4, and n are defined in the specification;

(II) about 1 to about 75 weight percent free radically polymerizable

vinyl monomer which is capable of copolymerizing with the polymer wherein said free radically polymerizable monomer comprises:

(i) about 5 to about 100 parts by weight of an acidic monomer selected from the group consisting of methacrylic acid, acrylic acid, and mixtures thereof;

(ii) about 0 to about 95 parts by weight of an acrylate monomer selected from the group consisting of esters of acrylic acid comprising 4 to 21 carbon atoms and esters of methacrylic acid comprising 5 to 21 carbon atoms and mixtures thereof; based upon 100 parts total by weight of said free radically polymerizable monomer;

wherein the weight percentages set forth in elements,(I) and (II) are based upon the total weight of the polymer of element (I) plus the monomer of element (II); and

(III) a sufficient amount of a silicate MQ tackifying resin to impart a degree of adhesive tack to the cured composition at the use temperature; and

(b) a foam layer which is coated on at least one side with the adhesive layer.

The present invention also provides the pressure sensitive adhesive composition and pressure sensitive adhesive.

SUMM . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional silicone according to Formula I. When an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.

SUMM . . . low oxygen permeability. When visible or ultraviolet radiation is used for curing, the composition also contains photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. **Benzoin** ethers such as **benzoin** methyl ether or **benzoin** isopropyl ether, substituted **benzoin** ethers such as anisole methyl ether, substituted acetophenones such as 2,2-diethyoxyacetophenone and 2,2-dimethoxy-2-phenylacetophenone, substituted alpha-ketols such as 2-methyl-2-hydroxypropiophenone, aromatic sulfonyl. . .

DETD . . . Monomer Source

AA	acrylic acid	Rohm and Haas
IOA	isooctyl acrylate [1]	
MAA	methacrylic acid	Eastman Kodak

1) Prepared by esterification of isooctyl **alcohol** (Exxon) with acrylic acid.

DETD . . . and MQ resin (Comparative Example 1) and compare it to the performance of hybrid PSAs prepared by formulating this same **gum /resin** mixture with varying amounts of methacrylic acid.

L3 ANSWER 7 OF 12 USPATFULL on STN
AN 96:38952 USPATFULL
TI Radiation-curable acrylate/silicone pressure-sensitive adhesive compositions
IN Mazurek, Mieczyslaw H., Roseville, MN, United States

Kantner, Steven S., St. Paul, MN, United States
Kinning, David J., Woodbury, MN, United States
Bogaert, Yvan A., Ghent, Belgium
PA Minnesota Mining and Manufacturing Company, Saint Paul, MN, United States (U.S. corporation)
PI US 5514730 19960507
AI US 1994-279718 19940725 (8)
RLI Continuation of Ser. No. US 1991-672342, filed on 20 Mar 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Berman, Susan W.
LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1369
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a radiation curable vinyl-silicone pressure-sensitive adhesive composition which combines the advantages of silicone and acrylate pressure-sensitive adhesives and which does not experience gross phase separation problems. The composition comprises at least about 20 weight percent of a certain telechelic silicone polymer, about 0.5 to about 80 weight percent of monofunctional free-radically polymerizable vinyl monomer copolymerizable with the silicone polymer, and a sufficient amount of a silicate MQ tackifying resin to impart a degree of adhesive tack to the cured composition at the use temperature, wherein the weight percentages of the silicone polymer and the monomer are based upon the total weight of the silicone polymer and monomer.

SUMM . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional silicone according to Formula I. When an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.

SUMM . . . low oxygen permeability. When visible or ultraviolet radiation is used for curing, the composition also contains photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. Photoinitiator is generally used at a concentration of from. . .

DETD . . . and Haas

DMACM N,N-dimethylacrylamide
Aldrich Chemical

CEA .beta.-carboxyethyl acrylate
Alcolac

NVP N-vinyl pyrrolidone
GAF

HDDA 1,6-hexanediol diacrylate
Sartomer

---

1) Prepared by esterification of isooctyl **alcohol** (Exxon) with acrylic acid.

2) Prepared by esterification of octadecyl **alcohol** (Sherex) with acrylic acid.

DETD . . . (Comparative Example 1) and compare it to the performance of hybrid PSAs prepared by formulating 90 parts of this same **gum/resin** mixture with 10 parts of various vinyl monomers (Examples 1-16).

DETD TABLE 3

Variation in 35K ACMAS/MQ Resin Ratio at
Constant 10/1 Silicone/FOA Ratio

Ex. #	**Gum/Resin**	Tack	Peel (N/dm)	Shear (Minutes)
26	1/0.8	H	33	200
27	1/1.0	H	48	10000+
28	1/1.2	H	63	10000+
29	1/1.4	H	78	10000+

DETD TABLE 5

Substitution of Low Molecular Weight Difunctional
Silicone or Monofunctional Silicone for a Portion of
35K ACMAS in 90/10 (1/1.2 **gum/resin**)/FOA Formulation

Ex. #	Ratio	Gum	Tack	Peel (N/dm)	Shear (minutes)
34	90/10	35K/5K	M	72	10000+
35	80/20	"	M	70	10000+
36	50/50.	.	.		

DETD TABLE 6

Substitution of Both Low Molecular Weight Monofunctional
and Difunctional Silicone For a Portion of the 35K ACMAS
in a 9/1 (1/1.2 **gum/resin**)/(9/1 IOA/AA) Formulation

Ex. #	Ratio	Gum	Tack	Peel (N/dm)	Shear (minutes)
43	65/35	35K/10K	H	39	10000+
44	65/35	35K/13K	H	46	10000+

. . .

L3 ANSWER 8 OF 12 USPATFULL on STN
AN 95:110571 USPATFULL
TI Radiation-curable silicone elastomers and pressure sensitive adhesives
IN Mazurek, Mieczyslaw H., St. Paul, MN, United States
Kantner, Steven S., St. Paul, MN, United States
Leir, Charles M., St. Paul, MN, United States
Sherman, Audrey A., St. Paul, MN, United States
PA Minnesota Mining and Manufacturing Company, St. Paul, MN, United States
(U.S. corporation)
PI US 5475124 19951212
AI US 1994-247023 19940520 (8)
RLI Division of Ser. No. US 1993-109004, filed on 16 Aug 1993, now patented,
Pat. No. US 5314748 which is a division of Ser. No. US 1991-792437,
filed on 15 Nov 1991, now patented, Pat. No. US 5237082 which is a
division of Ser. No. US 1991-671172, filed on 15 Mar 1991, now patented,
Pat. No. US 5091483 which is a continuation of Ser. No. US 1989-411410,
filed on 22 Sep 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Shaver, Paul F.
LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1608
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A composition which is curable to an elastomer comprising:

A polymer or mixture of polymers of the formula ##STR1## A composition which is curable to a pressure sensitive adhesive comprising the above polymer and a sufficient amount of tackifier. The invention also relates to fluorosilane compounds useful in the preparation of silicone macromonomer, their preparation and the preparation of silicone macromonomer.

SUMM . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional sillicone according to Formula I. When an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.

SUMM . . . as water. When visible or ultraviolet radiation is used for curing, the silicone compositions also contain photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. Photoinitiator is generally used at a concentration of from. . .

SUMM . . . from the group consisting of halogen-substituted silanes, nitrogen-substituted silanes, and oxygen-substituted silanes with a suitable nonreactive solvent, such as isopropyl **alcohol**, 2-butanone, or tetrahydrofuran, in order to form a solution. The use of water-miscible solvents, optionally in combination with other non-reactive. . .

DETD . . . azlactone was added dropwise slowly with stirring. The reaction mixture was stirred for 15 minutes, and 75 mn of isopropyl **alcohol** was added, followed by the slow addition of 16 g 48% aqueous hydrofluoric acid. The mixture was stirred for 15. . .

DETD . . . methacrylate was added dropwise slowly with stirring. The reaction mixture was stirred for 1 hour, and 100 mL of isopropyl **alcohol** and 0.12 g of the inhibitor, 2,5-di-tert butylhydroquinone, were added, followed by the slow addition of 32 g 48% aqueous. . .

DETD TABLE 7

Example	Gum	Ratio	Initial Aged **Gum/Resin** Peel Tack (N/dm)	Peel Shear* (g)	Tack (N/dm) (min)	(g)
25	20K ACMAS	1/1	42	399	42	600po 348

26. . .

L3 ANSWER 9 OF 12 USPATFULL on STN
AN 94:44490 USPATFULL
TI Radiation-curable silicone elastomers and pressure sensitive adhesives
IN Mazurek, Mieczyslaw H., Roseville, MN, United States
Kantner, Steven S., St. Paul, MN, United States
Leir, Charles M., Falcon Heights, MN, United States
Bogaert, Yvan A., Gent, Belgium
Galkiewicz, Robert K., Roseville, MN, United States
Sherman, Audrey A., St. Paul, MN, United States
PA Minnesota Mining & Manufacturing Company, St. Paul, MN, United States

(U.S. corporation)
PI US 5314748 19940524
AI US 1993-109004 19930816 (8)
RLI Division of Ser. No. US 1991-792437, filed on 15 Nov 1991, now patented, Pat. No. US 5237082 which is a division of Ser. No. US 1991-671172, filed on 15 Mar 1991, now patented, Pat. No. US 5091483 which is a continuation of Ser. No. US 1989-411410, filed on 22 Sep 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Bleutge, John C.; Assistant Examiner: Dean, Karen A.
LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1638
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A composition which is curable to an elastomer comprising:

A polymer or mixture of polymers of the formula ##STR1## wherein: X are monovalent moieties having ethylenic unsaturation which can be the same or different;

Y are divalent linking groups which can be the same or different;

m is an integer of 0 to 1;

D are monovalent moieties which can be the same or different selected from the group consisting of hydrogen, an alkyl group of 1 to about 10 carbon atoms, aryl, and substituted aryl;

R are divalent hydrocarbon groups which can be the same or different;

R.sup.1 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl;

R.sup.2 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl;

R.sup.3 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, vinyl, aryl, and substituted aryl;

R.sup.4 are monovalent moieties which can be the same or different selenited from the group consisting of alkyl, substituted alkyl, vinyl, aryl, and substituted aryl; and

n is an integer of about 270 to about 1000.

A composition which is curable to a pressure sensitive adhesive comprising the above polymer and a sufficient amount of tackifier. The invention also relates to fluorosilane compounds useful in the preparation of silicone macromonomer, their preparation and the preparation of silicone macromonomer.
DETD . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional silicone according to Formula I. when an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.

DETD . . . as water. When visible or ultraviolet radiation is used for curing, the silicone compositions also contain photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. Photoinitiator is generally used at a concentration of from. . .

DETD . . . from the group consisting of halogen-substituted silanes, nitrogen-substituted silanes, and oxygen-substituted silanes with a suitable nonreactive solvent, such as isopropyl **alcohol**, 2-butanone, or tetrahydrofuran, in order to form a solution. The use of water-miscible solvents, optionally in combination with other non-reactive. . .

DETD . . . azlactone was added dropwise slowly with stirring. The reaction mixture was stirred for 15 minutes, and 75 mL of isopropyl **alcohol** was added, followed by the slow addition of 16 g 48% aqueous hydrofluoric acid. The mixture was stirred for 15. . .

DETD . . . methacrylate was added dropwise slowly with stirring. The reaction mixture was stirred for 1 hour, and 100 mL of isopropyl **alcohol** and 0.12 g of the inhibitor, 2,5-di-tert butylhydroquinone, were added, followed by the slow addition of 32 g 48% aqueous. . .

DETD TABLE 7

Example	Gum	Gum/Resin Ratio	Initial Peel Tack (N/dm)	Aged Peel Tack (g) (N/dm)	Aged Shear* Tack (min)	(g)
25	20K ACMAS	1/1	42	399	42	600po
						348

26. . .

L3 ANSWER 10 OF 12 USPATFULL on STN
AN 93:98415 USPATFULL
TI Process for the production of water-absorbing polymer material with incorporated water-soluble substances and its use for the absorption and/or subsequent release of water or aqueous solutions
IN Chmelir, Miroslav, Krefeld, Germany, Federal Republic of
PA Chemische Fabrik Stockhausen GmbH, Krefeld, Germany, Federal Republic of (non-U.S. corporation)
PI US 5264471 19931123
AI US 1991-761073 19910917 (7)
PRAI DE 1990-4029591 19900919
DT Utility
FS Granted
EXNAM Primary Examiner: Michl, Paul R.; Assistant Examiner: DeWitt, LaVonda
LREP Sprung Horn Kramer & Woods
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 741
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to a process for the production of absorbers for water, aqueous solutions and body liquids, the absorbers consisting of

at least two components A and B, whereby component A is at least a water-swellable synthetic polymer or copolymer, and component B is at least a natural or synthetic compound being present at normal temperature as a pourable powder which is highly or at least partially soluble, in water, or as a liquid. The present invention is characterized by the fact that component B is added in the form of a powder, a liquid or as a solution to component A during the end phase of the production process thereof after a polymer reaction degree of 90%, preferably 95% is attained, that is is mixed with the polymer gel of component A and, in order to obtain a powdery, pourable end product, is dried, if necessary, and ground. The invention further relates to the use of said absorbers for the absorption and/or retention of water and/or aqueous solutions and for the subsequent controlled release of water and the substances contained in the swollen polymer gel and soluble in the aqueous medium (component B) to other bodies, preferably to plants, as nutrients for various cultures, and in the controlled dosage of nutrients and drugs.

SUMM . . . such as potassium-peroxydisulfate-sodium-disulfite, hydrogen peroxide hydroxylamine chloride, or azoinitiators, such as AIBN [2,2'-azobis-(isobutyronitrile)] or 2,2'-azobis(2-amidinopropane)dihydrochloride. Examples of suitable photoinitiators include **benzoin** and the derivatives thereof, e.g., **benzoin** ether, such as **benzoin**-ethyl-propyl-ether, benzil and the derivatives thereof, such as benzil ketals or aryl diazonium salts, acetophenone derivatives, and others, alone or in. . .

SUMM . . . cellulose fibers, such as viscose-, acetate- and triacetate fibers, or of synthetic fibers based on polyester, polyolefins, polyacrylonitrile, polyamide, polyvinyl **alcohol**, polyvinyl acetate, and polyvinyl chloride, polyurethane, polyvinyl urea, as well as the copolymers of these polymers. The fibrous materials may. . .

SUMM . . . acids, of the acrylamide or methacrylamide with one another or with vinyl pyrrolidone and/or vinyl acetate, as well as polyvinyl **alcohol**.

CLM What is claimed is:

. . . The process according to claim 1, wherein in addition to component B at least one polysaccharide or polysaccharide derivative or **gum resin** or a mixture thereof are added.

. . . 1, wherein in addition to component B fibers of wool, silk, cotton, cellulose, viscose, acetate, triacetate, polyester, polyolefin, polyamide, polyvinyl **alcohol**, polyurethane, polyurea, or polyacrylonitrile are added.

L3 ANSWER 11 OF 12 USPATFULL on STN
AN 93:98222 USPATFULL
TI Radiation-curable acrylate/silicone pressure-sensitive adhesive coated tapes adherable to paint coated substrates
IN Mazurek, Mieczyslaw H., Roseville, MN, United States
Kinning, David J., Woodbury, MN, United States
Kantner, Steven S., St. Paul, MN, United States
PA Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)
PI US 5264278 19931123
AI US 1991-672356 19910320 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Davis, Jenna L.
LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.
CLMN Number of Claims: 29
ECL Exemplary Claim: 1

DRWN No Drawings
LN.CNT 1346
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides an acrylate/silicone pressure-sensitive adhesive tape having a foam backing having improved adhesion to painted surfaces and low temperature performance.
SUMM . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional silicone according to Formula I. When an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.
SUMM . . . low oxygen permeability. When visible or ultraviolet radiation is used for curing, the composition also contains photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. **Benzoin** ethers such as **benzoin** methyl ether or **benzoin** isopropyl ether, substituted **benzoin** ethers such as anisole methyl ether, substituted acetophenones such as 2,2-diethyoxyacetophenone and 2,2-dimethoxy-2-phenylacetophenone, substituted alpha-ketols such as 2-methyl-2-hydroxypropiophenone, aromatic sulfonyl. . .
DETD . . . Monomer Source

AA	acrylic acid	Rohm and Haas
IOA	isooctyl acrylate [1]	
MAA	methacrylic acid	Eastman Kodak

1) Prepared by esterification of isooctyl **alcohol** (Exxon) with acrylic acid.
DETD . . . and MQ resin (Comparative Example 1) and compare it to the performance of hybrid PSAs prepared by formulating this same **gum**/**resin** mixture with varying amounts of methacrylic acid.

L3 ANSWER 12 OF 12 USPATFULL on STN
AN 92:15109 USPATFULL
TI Radiation-curable silicone elastomers and pressure sensitive adhesives
IN Mazurek, Mieczyslaw H., St. Paul, MN, United States
Kantner, Steven S., St. Paul, MN, United States
Leir, Charles M., St. Paul, MN, United States
Bogaert, Yvan A., Gent, Belgium
Galkiewicz, Robert K., St. Paul, MN, United States
Sherman, Audrey A., St. Paul, MN, United States
PA Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)
PI US 5091483 19920225
AI US 1991-671172 19910315 (7)
RLI Continuation of Ser. No. US 1989-411410, filed on 22 Sep 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Michl, Paul R.; Assistant Examiner: Hellender, Karen A.
LREP Griswold, Gary L., Kirn, Walter N., Dowdall, Janice L.
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1691
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition which is curable to an elastomer comprising:

A polymer or mixture of polymers of the formula ##STR1## wherein: X are monovalent moieties having ethylenic unsaturation which can be the same or different;

Y are divalent linking groups which can be the same or different;

m is an integer of 0 to 1;

D are monovalent moieties which can be the same or different selected from the group consisting of hydrogen, an alkyl group of 1 to about 10 carbon atoms, aryl, and substituted aryl;

R are divalent hydrocarbon groups which can be the same or different;

R.sup.1 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl;

R.sup.2 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl;

R.sup.3 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, vinyl, aryl, and substituted aryl;

R.sup.4 are monovalent moieties which can be the same or different selected from the group consisting of alkyl, substituted alkyl, vinyl, aryl, and substituted aryl; and

n is an integer of about 270 to about 1000.

A composition which is curable to a pressure sensitive adhesive comprising the above polymer and a sufficient amount of tackifier. Thhe invention also relates to fluorosilane compounds useful in the preparation of silicone macromonomer, their preparation and the preparation of silicone macromonomer.

SUMM . . . such as phosgene) and the resultant product reacted in a second step with a nucleophile, e.g., an amine or an **alcohol**, to provide terminally difunctional silicone according to Formula I. When an **alcohol** such as hydroxyethyl acrylate, hydroxyethyl methacrylate, or hydroxypropyl methacrylate is utilized, the product organopolysiloxane contains urethane moieties.

SUMM . . . as water. When visible or ultraviolet radiation is used for curing, the silicone compositions also contain photoinitiator. Suitable photoinitiators include **benzoin** ethers, benzophenone and derivatives thereof, acetophenone derivatives, camphorquinone, and the like. Photoinitiator is generally used at a concentration of from. . .

SUMM . . . from the group consisting of halogen-substituted silanes, nitrogen-substituted silanes, and oxygen-substituted silanes with a suitable nonreactive solvent, such as isopropyl **alcohol**, 2-butanone, or tetrahydrofuran, in order to form a solution. The use of water-miscible solvents, optionally in combination with other non-reactive. . .

DETD . . . azlactone was added dropwise slowly with stirring. The reaction mixture was stirred for 15 minutes, and 75 mL of isopropyl **alcohol** was added, followed by the slow addition of 16 g 48% aqueous hydrofluoric acid. The mixture was stirred for 15. . .

DETD . . . methacrylate was added dropwise slowly with stirring. The reaction mixture was stirred for 1 hour, and 100 mL of isopropyl

alcohol and 0.12 g of the inhibitor, 2,5-di-tert butylhydroquinone, were added, followed by the slow addition of 32 g 48% aqueous. . . .

DETD TABLE 7

Example	Gum	Gum/Resin Ratio	Initial Peel Tack (N/dm)	Aged Peel Tack (g) (N/dm)	Aged Shear* (min)	Aged Tack (g)
25	20K ACMAS	1/1	42	399	42	600 po

. . .